SERVICE MANUAL
WINNER 2004

handicare

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This manual

This manual contains the basic instructions for repairs and general maintenance of the Winner electric scooter. Mechanics who do repairs on this scooter must be well trained and familiar with the repair methods and the maintenance of the Winner electric scooter.
It is important to see to it that work is always done safely, particularly with respect to activities where the scooter must be lifted up.
We advise that you contact our service department before doing repair work on a scooter that has been involved in an accident.
The following specifications are important when ordering parts:

- Model
- Manufacture year
- Color
- Identification number
- Part number
- Name of the relevant part

This information can be found on the identification plate. See 'Identification of the product'.

Product reference

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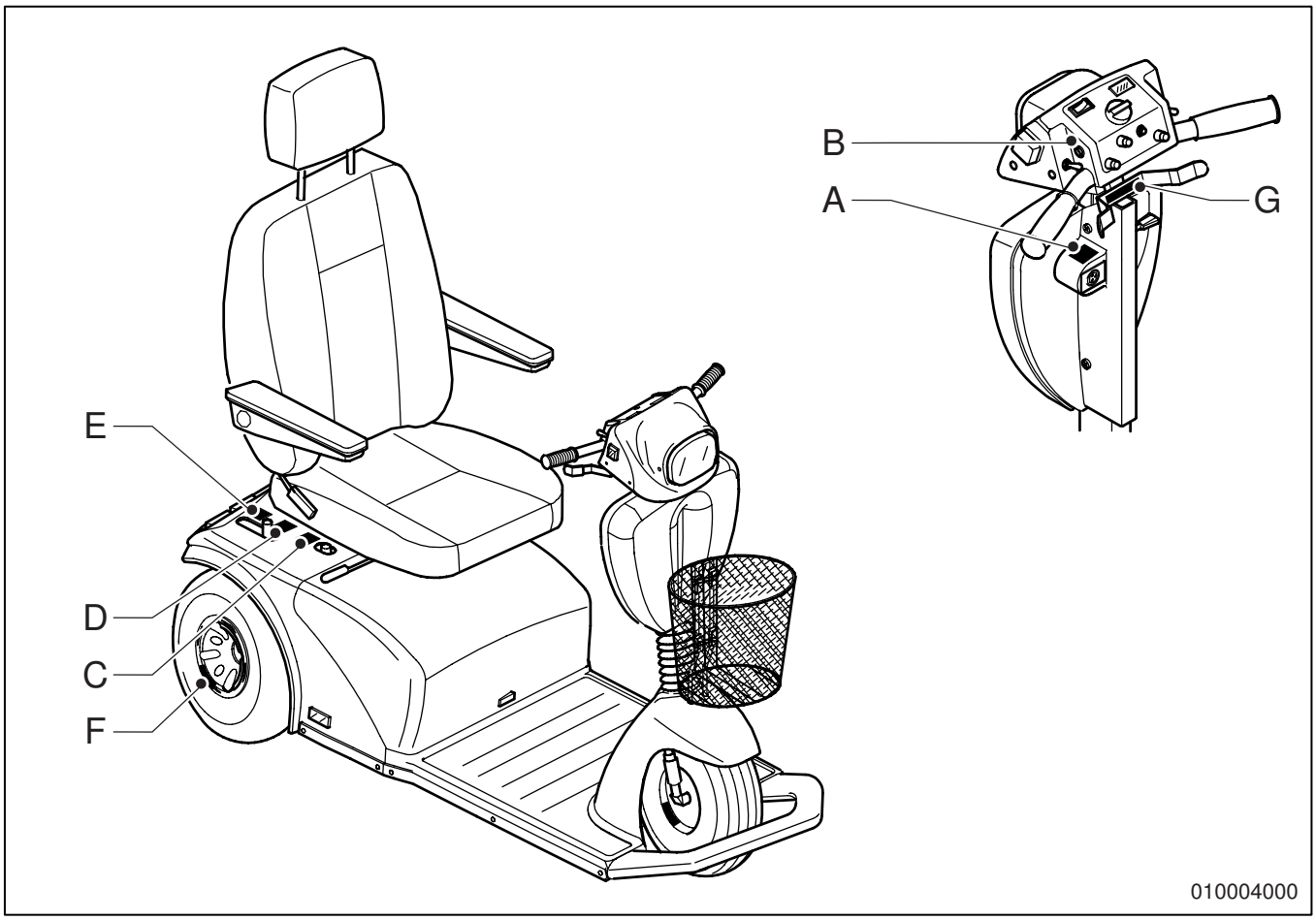
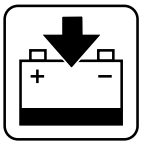


The product has the following decals and labels.

A. Charging connection
B. Fuse for lighting
C. Automatic fuse
D. Driving
E. Pushing
F. Tire pressure wheels
G. Reverse – Forward drive



A. Charging connection

For charging the batteries, see 'charging'.

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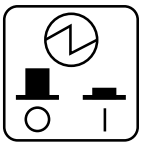
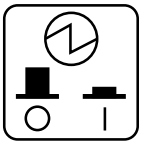


B. Fuse for the lighting

Here you find the fuse for the lighting. See 'Product specifications'.



C. Automatic fuse

The scooter has a safety fuse feature. See 'automatic fuse' and 'faults'.

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D. Driving

The drive of the motor is switched on: the scooter can be electrically driven.

E. Pushing

The drive of the motor is disconnected: the scooter can be pushed electrically.

F. Tire pressure wheels

For tire pressure of the wheels, see 'product specification sheet'.

G. Reverse – Forward drive

When the operating handle is pressed, the scooter will drive forward or in reverse. See 'Driving forward and in reverse'.
The following pictograms are used in this manual:

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CAUTION
Procedures that can result - if they are not executed properly - in damage to the product, the environment, or human injury.

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ATTENTION!
Suggestions and advice for conducting the relevant tasks or activities more easily.

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Consult the specified information source(s) first.

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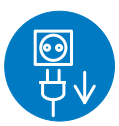

Pull the charge cord out of the charging connection of the scooter before doing any maintenance on the scooter.

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Available documentation

The following technical documentation is available / required to service this scooter:
- Owner's manual
- Service manual.

XXXXXX-010005000-en.doc

Service and technical support

For information concerning specific settings, maintenance or repair work please contacts your dealer. He is always prepared to help you.
Ensure you have at hand:

Model
Manufacture year
Identification number

This information can be found on the identification plate. See 'Identification of the product'.

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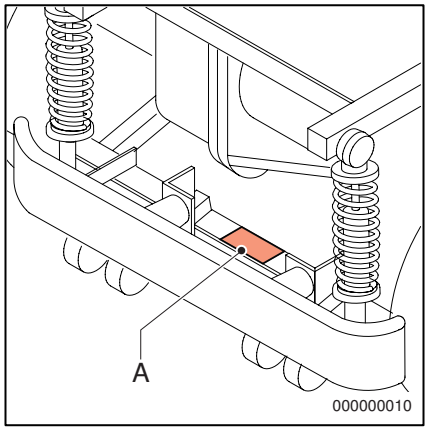
Identification plate

- See fig. 000000010.

On this plate (A) information on the product can be found. See: 'Identification of the product'.



Identification of the product

- See fig. 010007010.

A. Model
B. Manufacture year
C. Identification number
D. User area indoors or outdoors
E. Maximum load in kg

- For the place of the identification plate, see 'main components'.

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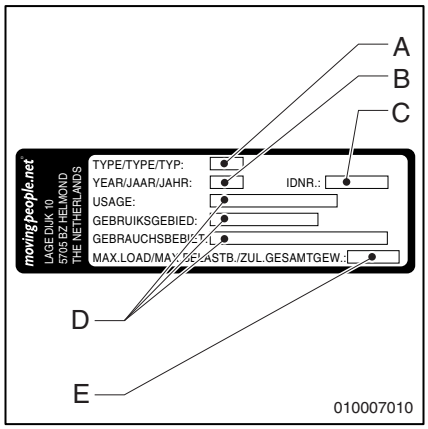

Warranty stipulations concerning the scooter

In the following warranty and liability stipulations the terms and definitions as summed up hereafter must be explained as follows:

- Product: The hand-operated or electrical wheelchair or scooter manufactured and delivered by Handicare.
- Customer: The person who directly obtains a Product from Handicare or an authorized representative.
- Dealer: The person who delivers a Product obtained from Handicare to customers or third parties.
- User: The person who uses a Product manufactured by Handicare.

Irrespective of what is determined concerning warranty conditions applicable to the Product, in any case the following applies with regard to the warranty:

1. Except insofar as described otherwise Handicare guarantees the Product for its suitability for the purpose for which the Product is intended - all of these points as described in this manual - and for the quality of the material of which the Product is made and the manner in which the Product is manufactured.
2. Repairs or replacement of parts of the Product that may be necessary as a result of faults that are based on qualitatively faulty material or manufacturing errors will be executed free of charge, as long as such faults occurred within one (1) year after the date of delivery of the Product to the Customer. The parts to be replaced must be shipped post-paid to Handicare. Disassembly or assembly of these parts is for the expense of the Customer. Therefore the following cases are not eligible for free repair or replacement as meant above:
   - The repair or replacement that is necessary in connection with faults that arise after one (1) year after the date of delivery of the Product to the Customer;
   - The repair or replacement that is required in connection with faults due to improper or careless use of the Product or that are based on the Product being used for another purpose than the one for which it is intended, in which regard it applies that if the Customer is a Dealer, this Dealer will indemnify Handicare against possible claims from Users or other third parties for faults based on an incorrect or careless use of the Product;
   - Parts that are subject to wear, and the need for repair or replacement of the parts are the actual consequence of normal wear. These can include, but are not limited to, tires, shrouds, arm-pads, seatings etc.
3. Irrespective of that stipulated under 2, it applies as far as an electric Product is concerned that with regard to the battery that forms part of the Product warranty is only given in case of faults or non-functioning of the battery that are demonstrably the direct consequence of material or manufacturing errors. A fault or non-functioning of the battery as a result of normal wear is not covered by the warranty as meant in these warranty stipulations. Similarly not covered by the warranty are faults or non-functioning that are the consequence of improper or unprofessional use of the Product or the battery that is part of the Product, including the incorrect charging of the battery and the failure to carry out timely and good maintenance, in which context it also applies that if the Customer is a Dealer, this Dealer will indemnify Handicare against possible claims from Users or other third parties that are based on the above mentioned improper or unprofessional use of the Product or the battery that is part of the Product. Handicare does not guarantee batteries provided by dealers or purchased by the customer.
4. The warranty conditions as mentioned in above stipulations in any case become null and void if:
   - The guidelines of Handicare for the maintenance of the Product are not, or insufficiently, followed;
   - A necessary repair or replacement of parts is based on neglect, damage or abuse of the Product or a use of the Product for another purpose than the one for which it was intended;
   - Parts of the Product are replaced by parts of another origin than those which Handicare uses and/or parts of the Product are replaced without the permission of Handicare.
5. The warranties as mentioned in stipulations 1 through 3 also become null and void if what is involved is re-used by a new user within the warranty period and that such re-use necessitates adaptations to the product and those adaptations are carried out without the instructions and/or at the order of Handicare.
6. To retain rights under the above delineated warranties the Customer must, in case of damage or other calamities, as rapidly as possible contact Handicare and inform them as fully as possible. The possibility of taking recourse to the above-mentioned warranty conditions becomes null and void for the Customer in any case after 20 workdays after the claim situation or the calamity arises that was the reason for the recourse to the guarantee.
7. The replacement of a part or the repair or the reconditioning of the Product within a current warranty period does not extend the warranty period.
8. Handicare gives no warranty on repair to or reconditioning of the Product carried out other than under order of and/or at the instructions of Handicare. If repairs and/or reconditioning are executed by or on behalf of a Customer, the Customer indemnifies Handicare with respect to the claims of third parties who result, in the broadest sense of the word, from such repairs or reconditioning.

Liability stipulations concerning the Product
Irrespective of what is determined regarding liability in the general conditions applicable to the Product, with regard to liability in any case the following applies:

1. taking into consideration the following stipulations, Handicare only accepts liability for loss due to death or physical injury that is the result of a defect in the Product for which Handicare is responsible and for damage to another object that is the private property of the user of the Product, as long as said loss is the direct result of a fault in the Product.
2. Handicare accepts no other or further liability than delineated under 1. In particular Handicare accepts no liability for consequential damage, in any form whatsoever.

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Used scooters and the environment

If your scooter has become superfluous or needs to be replaced, it can usually be taken back by your dealer. If this is not possible, please contact your local authorities for the possibilities of recycling or an environmentally friendly way of disposing of the used materials.
For the production of the scooter several plastics and metals have been used. The scooter also contains electronic components that must go to electronic waste. Used batteries belong to chemical waste.

Use according to purpose[1]

The scooter Winner was designed for:

- transport of persons with a weight of up to 159 kg
- use on paved roads, sidewalks, footways, and bike-ways.
- use in and around the house

Your supplier should give you good user's instructions before you can independently operate the product and participate in traffic.
You must be able to correct the consequences of actions while driving the Winner.
Consider operating the Winner scooter under the monitoring of an experienced dealer during first operations.
The Winner scooter is not a motorized vehicle in the traffic regulations sense.

The Winner has a maximum speed of approximately 12 or 15 km/h (7 or 10 mph), depending on the model.

PLEASE MAKE SURE YOU ARE WELL ACQUAINTED WITH THE CONTENTS OF THIS OWNER'S MANUAL BEFORE DRIVING THE WINNER.

If you use the scooter for other purposes than those for which it is intended, Handicare accepts no liability whatsoever for damage or injury resulting from such use other than that for which the scooter was developed and designed.

'Use according to purpose' as established in EN 292-1 is the use for which the technical product is suitable according to the statement of the manufacturer, including his instructions in the sales brochure. In case of doubt this is the use that follows from the construction, execution and function of the product. Use according to purpose also includes taking into consideration the instructions in the owner's manual.

1 General safety regulations and instructions

Handicare accepts no liability whatsoever for damage or injury caused by the failure to (strictly) adhere to the safety guidelines and instructions or else due to carelessness during the use and cleaning of the scooter and possible accessories. Depending on the specific work circumstances or the accessories used, additional safety instructions may be required. Please contact your dealer immediately if you observe a potential danger during the use of the product.

The user of the scooter (see under 'use according to purpose') is at all times fully responsible for the fulfillment of the locally applicable safety regulations and guidelines.

1.1 Decals and instructions on the scooter

Signs, symbols and instructions placed on this scooter comprise part of its safety facilities. They must never be covered or removed and must remain present and clearly legible throughout the entire life span of the scooter. Immediately replace or repair illegible or damaged signs, symbols and instructions. Contact your dealer with regard to this.

1.2 Technical specifications

The technical specifications may not be changed.

1.3 Modifications

Modification of (parts of) this product is not permitted.

1.4 Safety

To avoid accidents and undesirable situations, it is of great importance to pay attention to the following safety instructions.

- *Pay extra attention to riding on slopes:*
  - *Never drive the Winner up a slope with an angle greater than 11°.*
  - *On slopes always drive slowly and with awareness.*
  - *Never drive down a slope at full speed.*
  - *Do not drive down slopes with loose gravel or a sandy surface, because one of the back wheels might slip.*
  - *Do not turn on a slope.*
- *Never take curves at full speed. Decrease speed on the approach and on the curve.*

- *Be sure that no items of clothing hang loose. These could become caught between the wheels.*
- *Make sure your fingers do not get caught in the mechanism of the steering adjustment.*

- *Adjust your driving according to the circumstances:*
  - *Drive carefully on slippery roads, resulting from rain, ice, or snow!*
  - *Drive more slowly in crowded environments.*
  - *Do not use the scooter on uneven roads.*
  - *Avoid the Winner from coming into contact with seawater. Seawater is caustic and may damage the scooter.*
  - *Avoid the Winner from coming into contact with sand. Sand can affect the moving parts of the scooter, resulting in unnecessarily rapid wear.*
- *Never operate the scooter when you are under the influence of drugs, alcohol or medication that could affect your driving ability.*
- *You must have sufficient visual acuity to be able to drive safely in the scooter.*
- *You are obliged to put the lights on when the view is hindered.*
- *Only use the indicator lights to indicate an intended change in driving direction.*
- *Only use the horn when it is necessary to warn pedestrians of other road users of dangerous circumstances.*

- *Never place metal parts on top of the batteries: this may cause a short in the batteries, resulting in damage.*
- *Do not take along any passengers: your scooter was specifically designed to transport only yourself.*
- *Do not burden your scooter with any more load than can be placed in the basket.*
- *Never hang anything from the handlebars.*

- *Never use your scooter to pull a cart: the scooter was not designed for this. Anyway, it is prohibited to do so. You might seriously damage your scooter if you do.*
- *Do not use the footplate as a step.*
- *Do not place your feet close to the front wheel and the front fork. Always keep your feet on the rubber mat, rather than against the front cover.*

- *The scooter is electronically operated. Certain parameters have been factory-set. These settings guarantee a comfortable and efficient use. It is not permitted to change these parameters.*
- *The standard version of your scooter was tested according to the strictest EMC requirements. Mobile telephones have no influence on the driving behaviour of the scooter.*
  When using a mobile telephone in the vicinity of a scooter with special adaptations, you are advised to first switch off the scooter.
- *Your scooter may influence electromagnetic fields such as alarm systems.*
- *If the electronics of the scooter is not properly screened off, this may affect sensitive electrical appliances, such as shop alarms and garage openers. The scooter has been tested for this. Should any problems of this nature occur, please report these to your supplier immediately.*

- *Take care in ultra-violet light: this may cause premature deterioration of materials such as rubber, plastic, and enamel.*
- *Watch out for protruding parts: these may damage your scooter or the environment.*
- *Keep your scooter away from open flames.*

2 Adjustment options

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2.1 Seat adjustments

The Winner seat offers a number of adjustment options to increase the sitting and driving comfort.

The following may be adjusted:
A. Seat height and depth
B. Backrest
C. Lower-back rest
D. Arm-rests
E. Headrest
F. Steering column

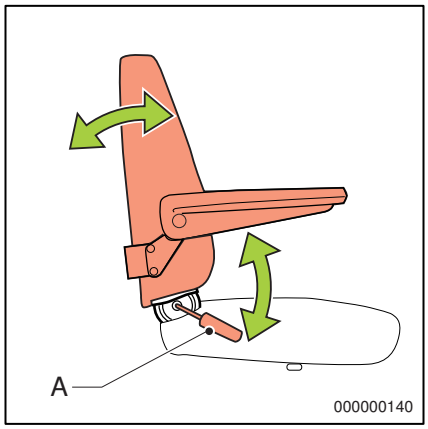
2.1.1 Adjusting the seat height and depth

The whole seat may be adjusted as follows:
- 10 cm in height
- 10 cm in forward direction

Both adjustments should be made by the dealer.

2.1.2 Backrest adjustment

- See fig. 000000140.



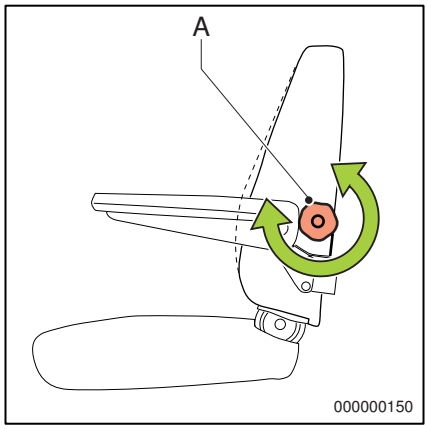
The backrest is continuously adjustable, from a fully horizontal to a fully vertical position.
The adjustment must be done as follows:
- Pull up the handle (A) while you are on the seat.
  The backrest will now automatically move forward.
- Press the backrest backward by leaning back to a position that is most comfortable for you.
- After adjustment, push the handle down to secure the backrest in the position you have chosen.

Attention:
Do not operate the handle if the seat is unoccupied, because the backrest will come forward very powerfully.

The backrest must be adjusted in such a way that your back is properly supported while driving. If the backrest is tilted too far backwards, this will negatively influence the seating stability, especially on slopes.

2.1.3 Lower-backrest adjustment

- See fig. 000000150.

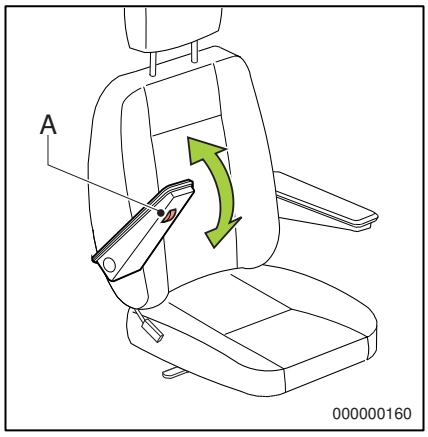


The lower-backrest can be adjusted to various positions, varying from more or less support in the lower-back area.

The adjustment must be done as follows:
- Seat yourself on the seat.
- Turn knob (A) in such a way that the lower-backrest reaches the most optimal position for you.

2.1.4 Adjusting the arm-rest

- See fig. 000000160.



Both armrests can be folded up completely. The height and the angle of the armrest can be adjusted.

The adjustment must be done as follows:
- Turn wheel (A) to adjust the height and the angle of the arm-rest.

Attention: if the position of the backrest is adjusted, the position of the
Armrests will change along with it.

2.1.5 Adjusting the headrest (option)

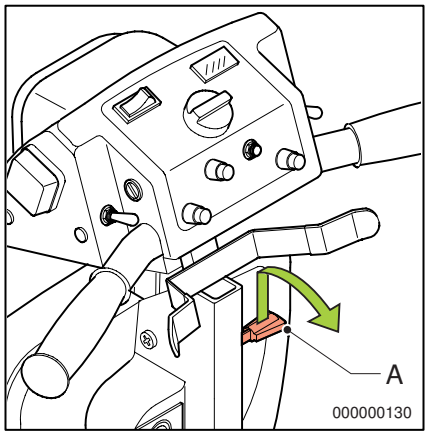
The headrest can be adjusted as follows:
- Three height adjustments
- Tilting forward and back

Adjusting the height of the headrest
The headrest can be pulled up by hand, and will lock into one of three positions by means of a click.

Tilting the headrest:
The headrest can be tilted by hand until the desired position is reached.

2.2 Adjusting the steering column

- See fig. 000000130.



The steering column can be adjusted as follows:
- Pull up handle (A) with one hand, while at the same time pulling the steering column towards you with the other, until the most comfortable position is reached.
- Release the handle in the chosen position. Then, release the steering column.

If you release the steering column while still holding up the handle, the gas-spring-loaded steering column will move to its most forward position.

Use caution when adjusting the steering column, to avoid getting your fingers jammed.

3 Drive programs

A hand held programmer is deliverable for programming the Winner with Solo controller. An user maunal belongs to the delivery of this manual. For the Winner with S-Drive controller there is a software program available but it's also programmable with the hand held programmer.

The standard adjustments are stated in the table below.

3.1 Controller settings Winner Solo

Function	Range	Resolution	High	Low
Forward Acceleration	0.1 to 10s, Fast/Slow	100 ms	30	30
Forward Deceleration	0.1 to 10s, Fast/Slow	100 ms	12	12
Reverse Acceleration	0.1 to 10s, Fast/Slow	100 ms	35	35
Reverse Deceleration	0.1 to 10s, Fast/Slow	100 ms	35	35
Forward speed	0 to 100%, Fast/Slow	1%	100	100
Reverse Speed	0 to 100%, Fast/Slow	1%	40	40
Invert Throttle Polarity	Yes/No		Yes	
Power Down Timer	0 to 20 minutes	1 min	0	
Help Mode	On-line help text	*	Not programmable	
Diagnostics	Fault codes from Solo	*	Not programmable	
Current Limit	20A to max rating	1A	110	
Motor Compensation	0 to 1W	5 mW	45	
Hold Factor	100 to 420%	4%	152	
Mid Current	0 to 100%, 1 to 255s	1%, 1s	15	50
Brake Time	0 to 1s	10 ms	80	
ISO Test	On / Off		On	
Inhibit Polarity	Hi / Lo		Lo	
Bridge Hold Time	0 to 5s	20 ms	60	
Throttle Gain	0 to 1250%	5%	150	
Pulse Reverse Alarm	Yes / No		Yes	
Wig-wag Throttle	Yes / No		Yes	
Low Battery Flash Inhibit	Yes / No		No	
Throttle Deadband	3% to 100%	1%	15	
Output Voltage	20 to 40V	1V	24	
TruCharge Cable Resistance	10 to 250 mOhm	5 mOhm	40	
TruCharge Cal.	1 to 200		100	
Profile values	-		40	80
Scale I factor	-		75	
Scale V factor	-		157	
Options register	-		-	
I limit reduction	-		30	
Abs I factor	-		43	
Demand clipping	-		160	30
Solo mode	-		1	

3.2 Controller settings Winner S-drive 120A

Winner S-Drive 120 15kmh

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	30	35
Forward Deceleration (0,1 Seconds)	15	13
Reverse Acceleration (0,1 Seconds)	35	40
Reverse Deceleration (0,1 Seconds)	20	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	30	30
Max Reverse Speed (%)	50	40
Min Reverse Speed (%)	50	40
Speed Limit Pot Enabled	Off	

Operation Settings	
Sleep timer (minutes)	20
Throttle Invert	No

Battery Settings	
Low battery Flash Level (Bars)	2
Cable Resistance (milli-Ohms	40
Calibration Factor	100
Low Battery Alarm	Off

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Non Latching
Inhibit 2: Speed (%)	50
Inhibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

General Settings		
Soft Stop	Off	
Brake Time (milli-seconds)	900	
Output Voltage (Volts)	24	
Status Output Type	2	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	0	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Freewheel Speed Limit	35	
Freewheel Time Out (0,01 Seconds)	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	

Motor Settings	
Current Limit Max (Amps)	110
Boost Drive Current (Amps)	120
Boost Drive Time (Seconds)	10
Current Foldback Threshold (Amps)	80
Curerent Foldback Time (Seconds)	70
Current Foldback Level (%)	59
Motor Cooling Time (Seconds)	660
Current Foldback Temperature (Deg C)	30
Current Limit Min (Amps)	10
Motor Compensation (milli Ohms)	20
Anti Rollback Level	12
Pull-away Delay (centi-Seconds)	0
Slope Factor	1275
Anti Rollback Velocity	90

Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Throttle Settings		
Throttle Type	1	
Throttle Deadband (%)	15	
Throttle Gain (%)	100	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
Iso Test Resistor	On	

3.3 Controller settings Winner S-drive 140A Schmid.

Winner S-Drive 140 15kmh Schmid

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	40	35
Forward Deceleration (0,1 Seconds)	15	13
Reverse Acceleration (0,1 Seconds)	35	40
Reverse Deceleration (0,1 Seconds)	60	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	30	30
Max Reverse Speed (%)	30	40
Min Reverse Speed (%)	15	40
Speed Limit Pot Enabled	Off	

Operation Settings	
Sleep timer (minutes)	20
Throttle Invert	No

Battery Settings	
Low battery Flash Level (Bars)	2
Cable Resistance (milli-Ohms	40
Calibration Factor	100
Low Battery Alarm	Off

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Non Latching
Inhibit 2: Speed (%)	50
Inhibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

General Settings	
Soft Stop	Off
Brake Time (milli-seconds)	900
Output Voltage (Volts)	24
Status Output Type	2
Diagnostic Flash Sequence	0
Reverse Alarm	Off
Pulsed Reverse Alarm	Off
Diagnostic Alarm	Off
Brake Disconnected Alarm	Off
Brake Fault Detect	On
Brake Light	On
Freewheel Speed Limit	35
Freewheel Time Out (0,01 Seconds)	20
Freewheel Enable	Disable
Inhibit 2 Horn Input Enable	Off

(0 = Trucharge, 1 = LED, 2 = Analogue)

Motor Settings	
Current Limit Max (Amps)	130
Boost Drive Current (Amps)	140
Boost Drive Time (Seconds)	10
Current Foldback Threshold (Amps)	80
Curerent Foldback Time (Seconds)	70
Current Foldback Level (%)	59
Motor Cooling Time (Seconds)	660
Current Foldback Temperature (Deg C)	30
Current Limit Min (Amps)	10
Motor Compensation (milli Ohms)	20
Anti Rollback Level	12
Pull-away Delay (centi-Seconds)	0
Slope Factor	1275
Anti Rollback Velocity	0

Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Throttle Settings	
Throttle Type	1
Throttle Deadband (%)	15
Throttle Gain (%)	100
Throttle Operated at Power-up	2
Throttle Reference Test	On
Iso Test Resistor	On

(0 = Drive, 1 = Inhibit, 2 = Trip)

3.4 Controller settings Winner S-drive 140A Schmid Alpine.

Winner S-Drive 140 15kmh Schmid Alpine

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	45	35
Forward Deceleration (0,1 Seconds)	15	13
Reverse Acceleration (0,1 Seconds)	35	40
Reverse Deceleration (0,1 Seconds)	60	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	30	30
Max Reverse Speed (%)	30	40
Min Reverse Speed (%)	20	40
Speed Limit Pot Enabled	Off	

Operation Settings	
Sleep timer (minutes)	20
Throttle Invert	No

Battery Settings	
Low battery Flash Level (Bars)	2
Cable Resistance (milli-Ohms	40
Calibration Factor	100
Low Battery Alarm	Off

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Non Latching
Inhibit 2: Speed (%)	50
Inhibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

General Settings		
Soft Stop	Off	
Brake Time (milli-seconds)	900	
Output Voltage (Volts)	24	
Status Output Type	2	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	0	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Freewheel Speed Limit	35	
Freewheel Time Out (0,01 Seconds)	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	

Motor Settings	
Current Limit Max (Amps)	130
Boost Drive Current (Amps)	140
Boost Drive Time (Seconds)	10
Current Foldback Threshold (Amps)	80
Curerent Foldback Time (Seconds)	70
Current Foldback Level (%)	59
Motor Cooling Time (Seconds)	660
Current Foldback Temperature (Deg C)	30
Current Limit Min (Amps)	10
Motor Compensation (milli Ohms)	15
Anti Rollback Level	12
Pull-away Delay (centi-Seconds)	0
Slope Factor	1275
Anti Rollback Velocity	0

Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	100	0

Throttle Settings		
Throttle Type	1	
Throttle Deadband (%)	15	
Throttle Gain (%)	100	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
Iso Test Resistor	On	

3.5 Controller settings Winner S-drive 140A CT Reduced speed.

Winner S-Drive 140 15kmh CT Reduced Speed

Only for Winners with the following serial numbers:
PW00001 t/m PW00288
NW01950 t/m NW02237
NW1865
NW05106

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	30	35
Forward Deceleration (0,1 Seconds)	15	13
Reverse Acceleration (0,1 Seconds)	35	40
Reverse Deceleration (0,1 Seconds)	60	25
Max Forward Speed (%)	90	90
Min Forward Speed (%)	30	30
Max Reverse Speed (%)	36	36
Min Reverse Speed (%)	20	20
Speed Limit Pot Enabled	Off	

Operation Settings	
Sleep timer (minutes)	20
Throttle Invert	No

Battery Settings	
Low battery Flash Level (Bars)	2
Cable Resistance (milli-Ohms	40
Calibration Factor	100
Low Battery Alarm	Off

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Non Latching
Inhibit 2: Speed (%)	50
Inhibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

General Settings		
Soft Stop	Off	
Brake Time (milli-seconds)	1000	
Output Voltage (Volts)	24	
Status Output Type	2	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	0	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Freewheel Speed Limit	35	
Freewheel Time Out (0,01 Seconds)	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	

Motor Settings	
Current Limit Max (Amps)	130
Boost Drive Current (Amps)	140
Boost Drive Time (Seconds)	10
Current Foldback Threshold (Amps)	80
Curerent Foldback Time (Seconds)	70
Current Foldback Level (%)	59
Motor Cooling Time (Seconds)	660
Current Foldback Temperature (Deg C)	30
Current Limit Min (Amps)	10
Motor Compensation (milli Ohms)	20
Anti Rollback Level	12
Pull-away Delay (centi-Seconds)	0
Slope Factor	950
Anti Rollback Velocity	0

Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	100	0
Reverse Speed (%)	40	0

Throttle Settings		
Throttle Type	1	
Throttle Deadband (%)	15	
Throttle Gain (%)	100	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
Iso Test Resistor	On	

3.6 Controller settings Winner S-drive 140A CT.

Winner S-Drive 140 15kmh CT

Speed Settings	Fast	Slow
Forward Acceleration (0,1 Seconds)	30	35
Forward Deceleration (0,1 Seconds)	15	13
Reverse Acceleration (0,1 Seconds)	35	40
Reverse Deceleration (0,1 Seconds)	60	25
Max Forward Speed (%)	100	100
Min Forward Speed (%)	30	30
Max Reverse Speed (%)	40	40
Min Reverse Speed (%)	20	20
Speed Limit Pot Enabled	Off	

Operation Settings	
Sleep timer (minutes)	20
Throttle Invert	No

Battery Settings	
Low battery Flash Level (Bars)	2
Cable Resistance (milli-Ohms	40
Calibration Factor	100
Low Battery Alarm	Off

Inhibit Settings	
Inhibit 1: Mode	1
Inhibit 1: Operation	Latching
Inhibit 1: Speed (%)	0
Inhibit 2: Mode	1
Inhibit 2: Operation	Non Latching
Inhibit 2: Speed (%)	50
Inhibit 3: Mode	1
Inhibit 3: Operation	Latching
Inhibit 3: Speed (%)	0
Aux Output: Mode	0

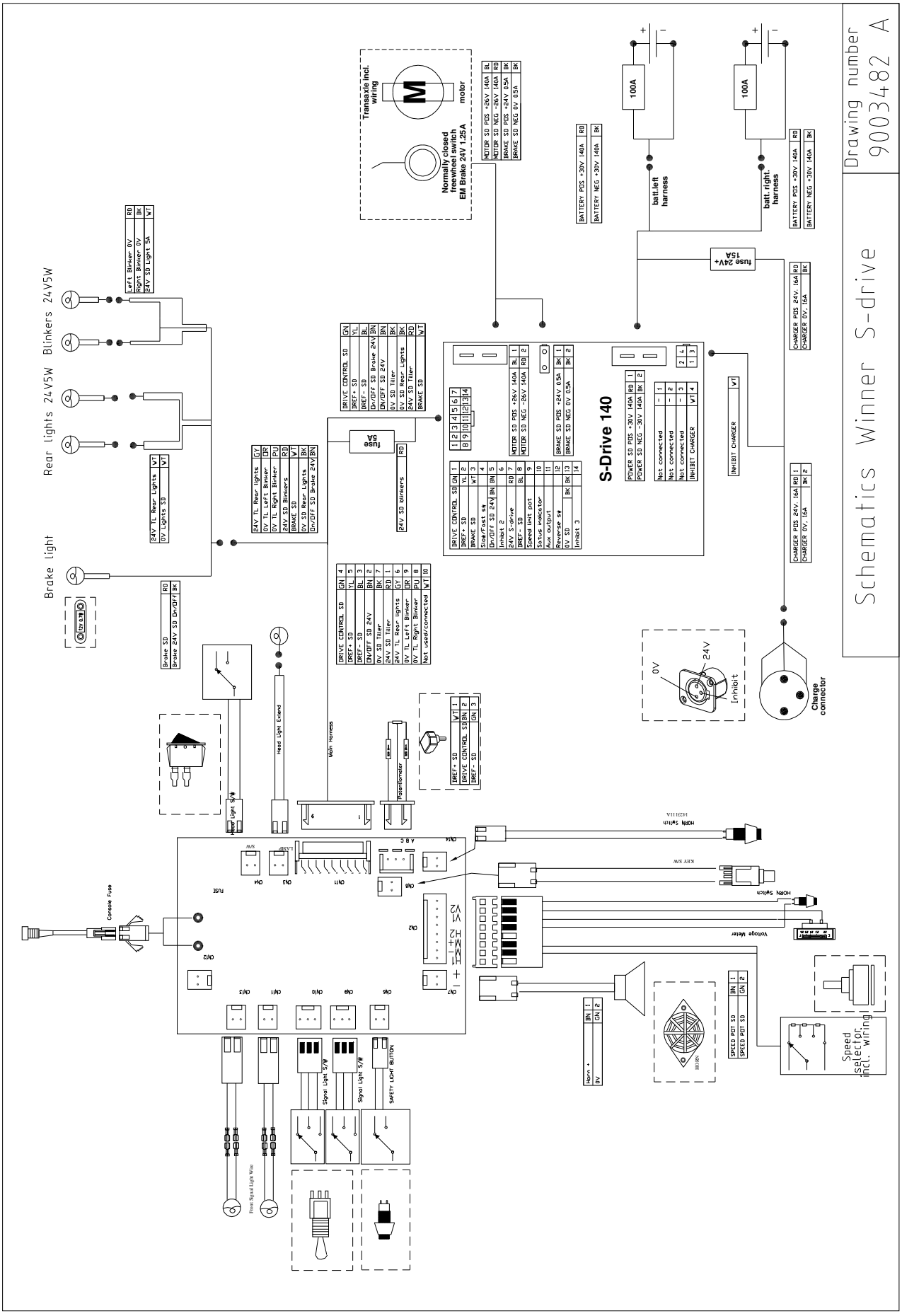
General Settings		
Soft Stop	Off	
Brake Time (milli-seconds)	1000	
Output Voltage (Volts)	24	
Status Output Type	2	(0 = Trucharge, 1 = LED, 2 = Analogue)
Diagnostic Flash Sequence	0	
Reverse Alarm	Off	
Pulsed Reverse Alarm	Off	
Diagnostic Alarm	Off	
Brake Disconnected Alarm	Off	
Brake Fault Detect	On	
Brake Light	On	
Freewheel Speed Limit	35	
Freewheel Time Out (0,01 Seconds)	20	
Freewheel Enable	Disable	
Inhibit 2 Horn Input Enable	Off	

Motor Settings	
Current Limit Max (Amps)	130
Boost Drive Current (Amps)	140
Boost Drive Time (Seconds)	10
Current Foldback Threshold (Amps)	80
Curerent Foldback Time (Seconds)	70
Current Foldback Level (%)	59
Motor Cooling Time (Seconds)	660
Current Foldback Temperature (Deg C)	30
Current Limit Min (Amps)	10
Motor Compensation (milli Ohms)	20
Anti Rollback Level	12
Pull-away Delay (centi-Seconds)	0
Slope Factor	950
Anti Rollback Velocity	0

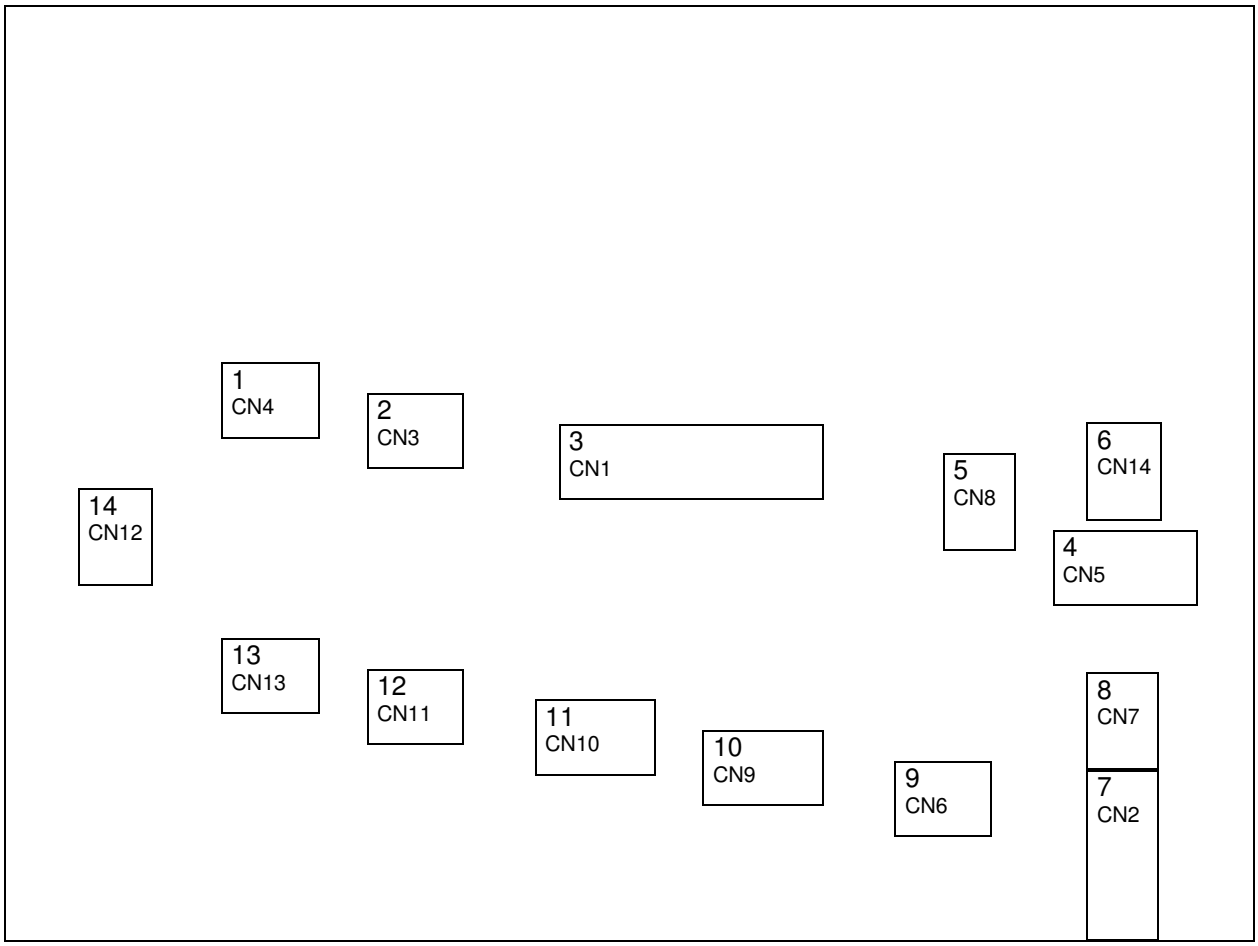
Factory Settings	Max	Min
Acceleration (0,1 Seconds)	100	1
Deceleration (0,1 Seconds)	100	1
Forward Speed (%)	90	0
Reverse Speed (%)	36	0

Throttle Settings		
Throttle Type	1	
Throttle Deadband (%)	15	
Throttle Gain (%)	100	
Throttle Operated at Power-up	2	(0 = Drive, 1 = Inhibit, 2 = Trip)
Throttle Reference Test	On	
Iso Test Resistor	On	

3.7 Electrical Diagram S-Drive



3.8 Connections printed circuit board



The PCB connections are stated in the table below.

Number	Connection Number	Function
1	CN4	Lighting switch
2	CN3	Head light
3	CN1	Main harness
4	CN5	Throttle
5	CN8	Key Switch
6	CN14	Horn switch left
7	CN2	Speed potentiometer/ Horn switch right / Battery indicator
8	CN7	Horn
9	CN6	Hazard light switch
10	CN9	Indicator switch right
11	CN10	Indicator switch left
12	CN11	Indicator right
13	CN13	Indicator left
14	CN12	Not used

4 Technical specifications

XXXXXX-010900000-nl.doc

4.1 Product specifications

Manufacturer	Handicare Nederland b.v.

4.1.1 Winner

Model	3 Wheel	4 Wheel
Maximum user's weight	159 kg	159 kg

Description	3 Wheel	4 Wheel
Total length	1410 mm	1410 mm
Total width	673 mm	673 mm
Minimal height (without chair and tiller folded downwards)	1000 mm	1000 mm
Total weight incl. batteries	153 kg (80Ah)	158 kg (80Ah)
Weight of heaviest part	n.v.t.	n.v.t.
Static stability downward	15°	15°
Static stability upward	15°	15°
Static stability sideways	15°	15°
Energy consumption: theoretic maximum distance	60 km (80Ah)	60 km (80Ah)
Dynamic stability on slopes	11°	11°
Climbing capacity for obstacles	100 mm	100 mm
Maximal speed forward	15 km/u	15 km/u
Minimum brake distance from maximum speed	2°	2°
Seat angle	430 mm	430 mm
Effective seating depth	500 mm	500 mm
Effective seating width	455 mm-520 mm	455 mm-520 mm
Sitting height from the front (adjustable in steps of 25 mm (0.8"))	85°-180°	85°-180°
Back angle	550 mm	550 mm
Back height	250 mm	250 mm
Armrest height		

Omschrijving	3 Wheel	4 Wheel
Front armrest to backrest	260 mm	260 mm
Minimum radius	1400 mm	1905 mm
Capacity to drive over obstacles	100 mm	100 mm
Ground clearance	114 mm	114 mm
Turning space	< 2000 mm	< 2000 mm

Test data	3 Wheel	4 Wheel
Weight test dummy	159 kg	

Operating force	3 Wheel	4 Wheel
Operating-handle power	< 60 N	< 60 N
Resetting automatic fuse	< 60 N	< 60 N
Electronic switches	< 15 N	< 15 N
Parking brake	< 60 N	< 60 N
Inserting charging plug	< 60 N	< 60 N

Technical data	3 Wheel	4 Wheel
Diameter front wheel	310 x 108 mm	292 x 108 mm
Diameter rear wheels	310 x 108 mm	310 x 108 mm
Tire pressure wheels	270 kPa (2,7 Bar)	270 kPa (2,7 Bar)

Batteries	3 Wheel	4 Wheel
Maximum dimensions batteries	324 x 175 x 213 mm	324 x 175 x 213 mm
Weight scooter without batteries	93 kg	98 kg
Battery capacity	80 Ah/20h	80 Ah/20h
Maximum permissible charging voltage	13,6 V	13,6 V
Maximum charging current	7 A	7 A
Connector type	A DIN 72311	A DIN 72311

4.2 Approval

The product meets the following standards:

1. NEN-EN 12182 Technical tools for the handicapped - General standards and testing methods October 1997.
2. NEN-EN 12184 Electrically driven wheelchairs, scooters and associated charging equipment - Standards and testing methods April 1999.
3. The Winner 3-wheel scooter is classified according to EN12184 (1999) in class C.
4. ISO 7176-8 Requirements and test methods for impact, static, and fatigue strength July 1998.
5. ISO 7176-9 climate tests for electric wheelchairs and scooters.
6. ISO 7176-14 Standards and test methods for controller systems of electrically driven wheelchairs 1997.
7. ISO 7176-16 Requirements of resistance to fire, May 1997.

4.3 Service information transaxles.

Part	***Service-check for:***	
	Winner with Schmid transaxle	***Winner with CT transaxle***
Carbon brushes	***Once a year or every 3000 Km***	***Once a year or every 3000 Km***
Length off carbon brush	***16mm new / 8mm end length***	***18mm new / 8mm end length***

5 Use of the parts lists

This document is meant as a reference book to be able to order parts for the scooter as shown on the front.

How to order:
To order parts please specify:
- Serial number (see the identification plate).
- Group (to which the relevant part belongs).
- Article number.
- Number of parts required.
- Description (in the relevant language).
- Dimensions (if applicable).

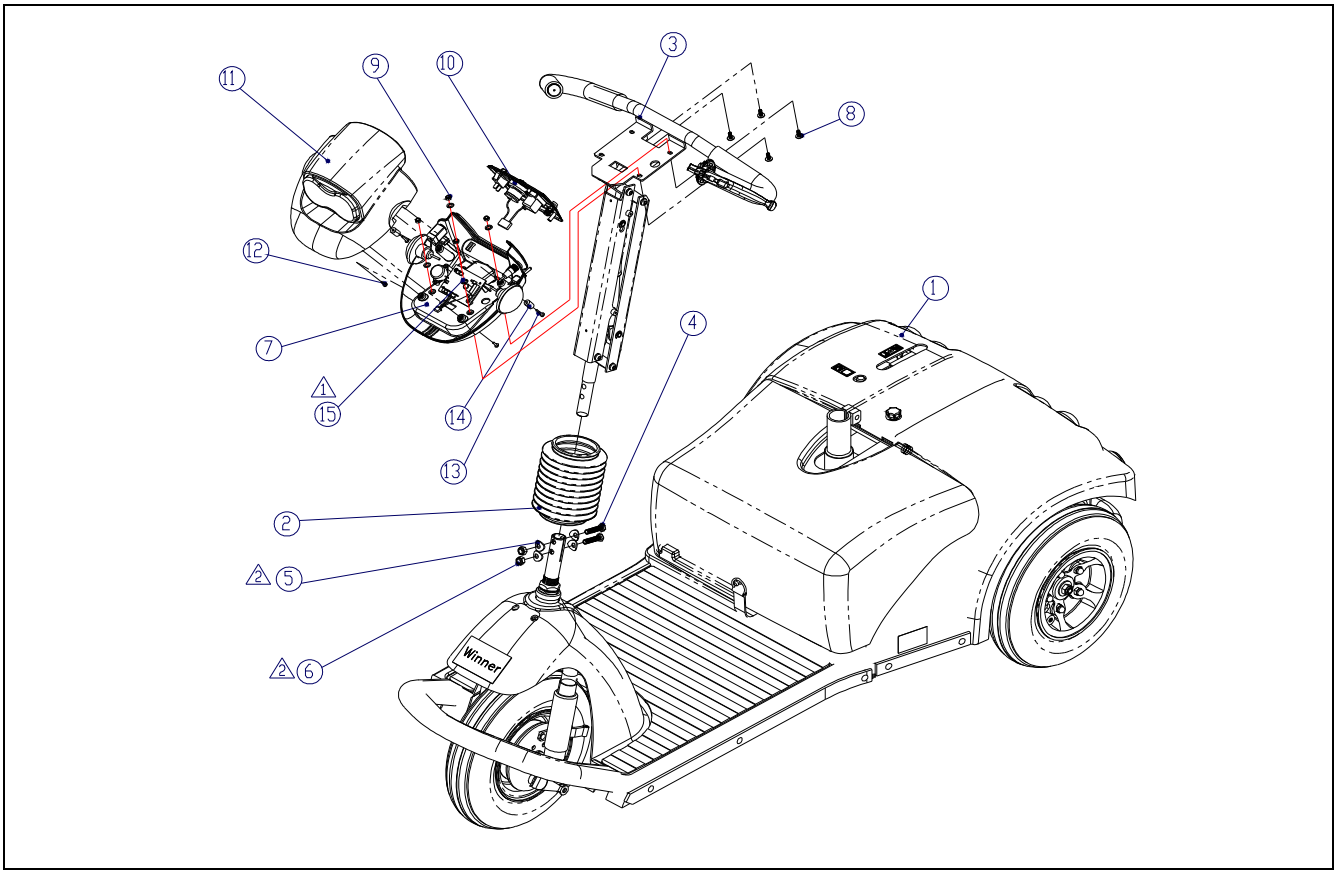
Remark:
- If a part does not have a position number, it means that the relevant part cannot be bought separately. The relevant part is part of the composition that is shown. Only the composition can be ordered, so it must be replaced in its entirety.
- Boxed position numbers refer to the relevant drawing.

Order address:
Please send orders by post or fax to your supplier.

Service technicians:
Repairs may only be done by trained and authorized service technicians.
In the execution of their work they are at all times fully responsible for the fulfilment of locally applicable safety guidelines and standards.
Temporary employees and persons in training may only execute repair and replacement work under the supervision of an authorized service technician.

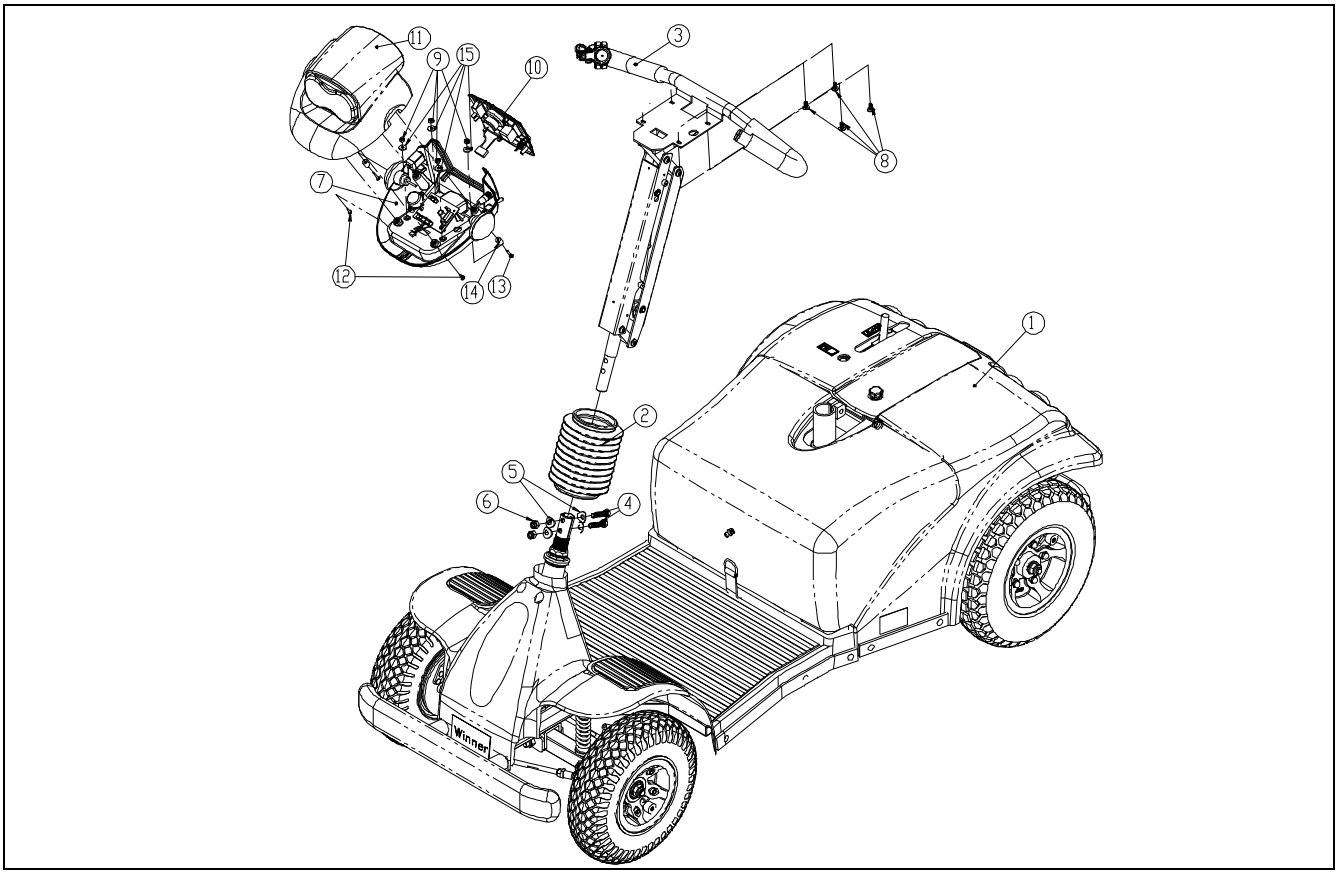
XXXXXX-020904000-en.doc

001: SCOOTER ASSY (3W)



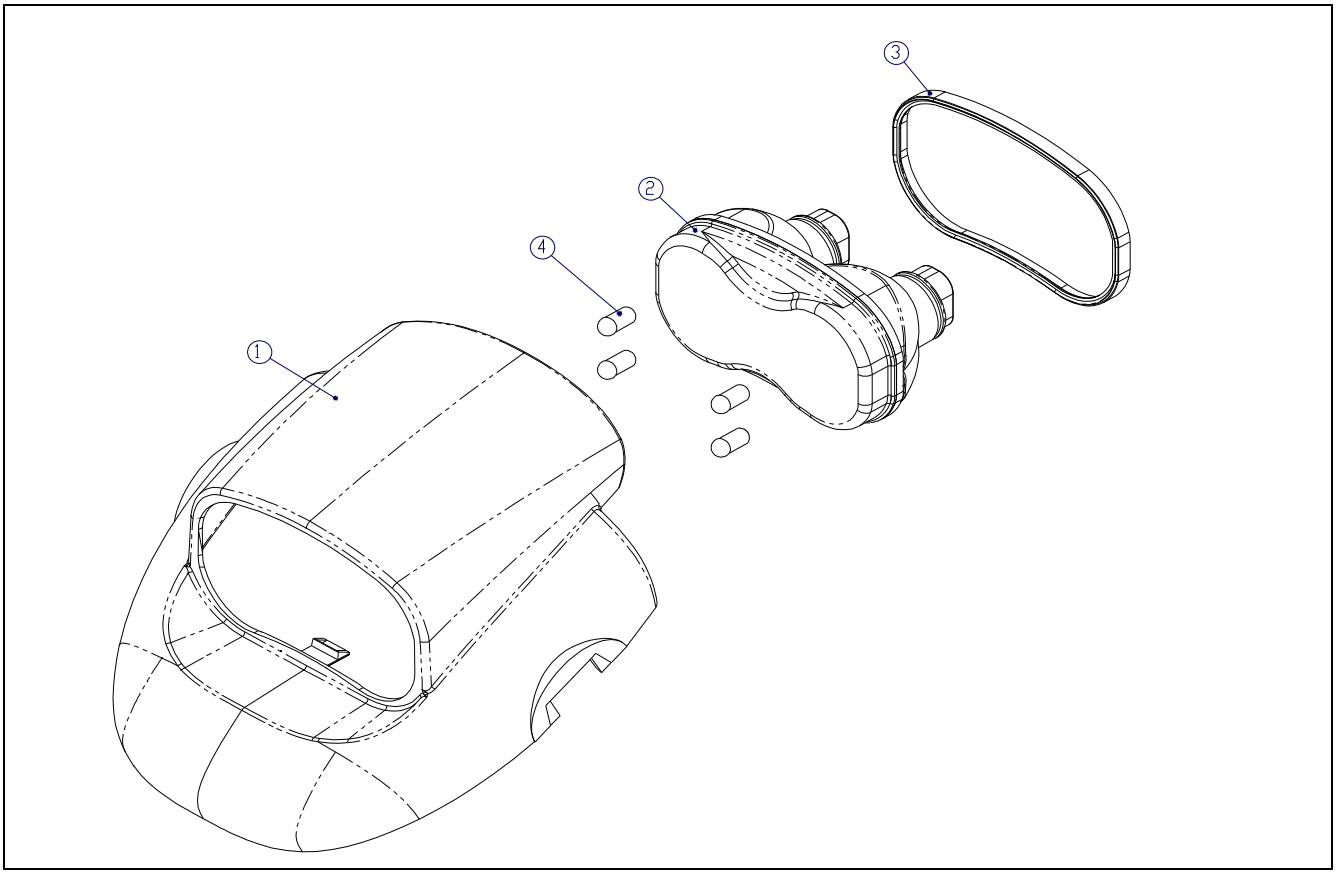
Pos	Article number	Units	Description	
1	No spare part	1	3W Scooter assy	
2	20456.0682	1	Rubber bellow	
3	9003154	1	Tiller parallel assy	
4	00000.4134	2	Screw M8xP1.25x35L	
5	1001675	4	Arc Washer	
6	00000.1702	2	Lock nut M8	
7	161.00151.000	1	Console bottom cover assy	
8	00000.3200	4	Screw M5xP0.8x12L	
9	00000.1700	4	Lock nut M5xP0.8	
10	161.00161.000	1	Console panel cover assy (Solo)	
	1009683	1	Console panel cover assy (S-Drive)	
11	161.00171.000	1	Console top cover assy	
12	001.03160.001	2	Screw 2,9x16mm	
13	001.03160.002	2	Screw 2,9x25mm	
14	161.00181.000	2	Block (Bush 12mm)	
15	00000.2101	4	Flat washer M5	

002: SCOOTER ASSY (4W)



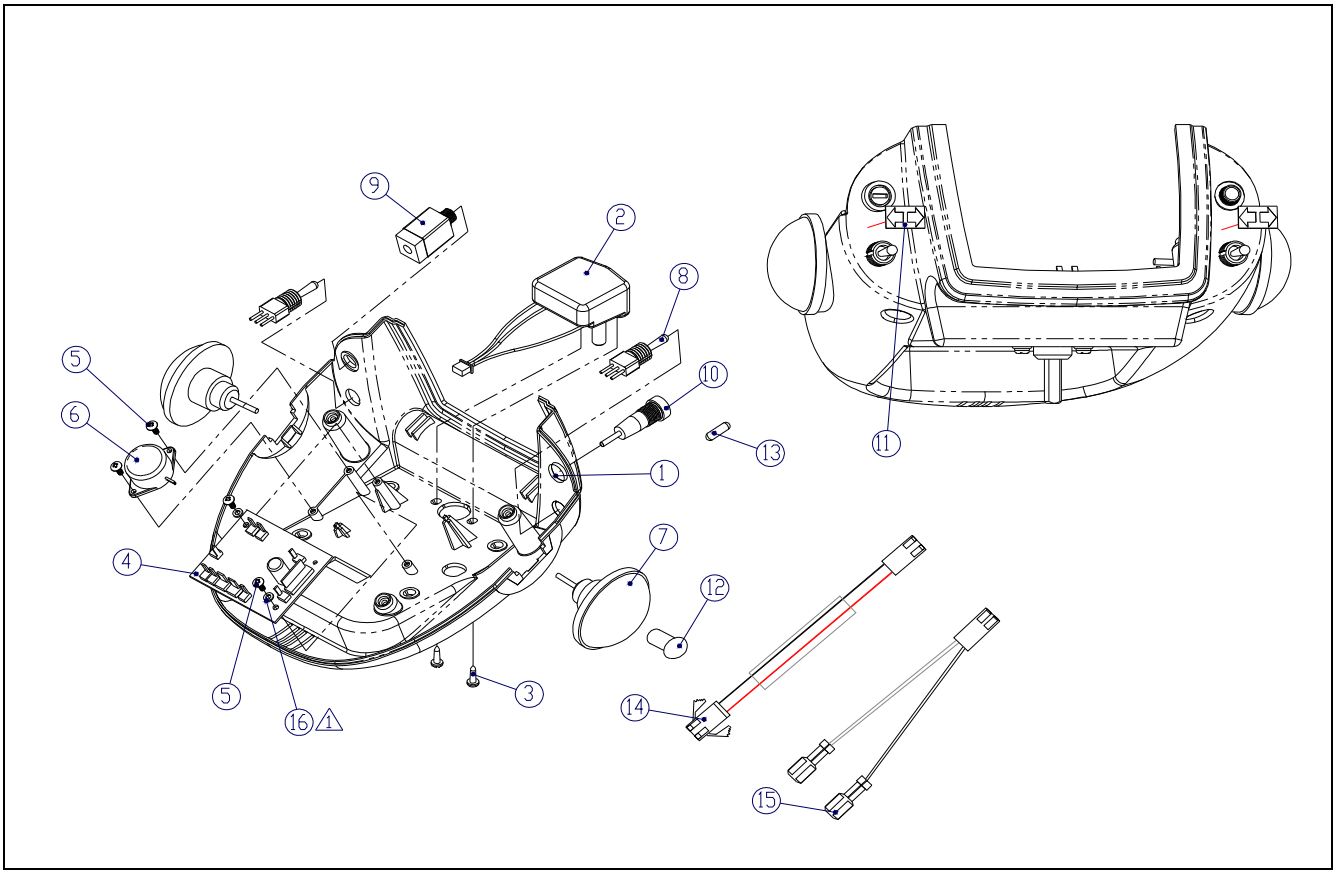
Pos	Article number	Units	Description	
1	No spare part	1	4W Scooter assy	
2	20456.0682	1	Rubber bellow	
3	9003154	1	Tiller parallel assy	
4	00000.4134	2	Screw M8xP1.25x35L	
5	1001675	4	Arc Washer	
6	00000.1702	2	Lock nut M8	
7	161.00151.000	1	Console bottom cover assy	
8	00000.3200	4	Screw M5xP0.8x12L	
9	00000.1700	4	Lock nut M5xP0.8	
10	161.00161.000	1	Console panel cover assy (Solo)	
	1009683	1	Console panel cover assy (S-Drive)	
11	161.00171.000	1	Console top cover assy	
12	001.03160.001	2	Screw 2,9x16mm	
13	001.03160.002	2	Screw 2,9x25mm	
14	161.00181.000	2	Block (Bush 12mm)	
15	00000.2101	4	Flat washer M5	

003: CONSOLE TOP COVER ASSY



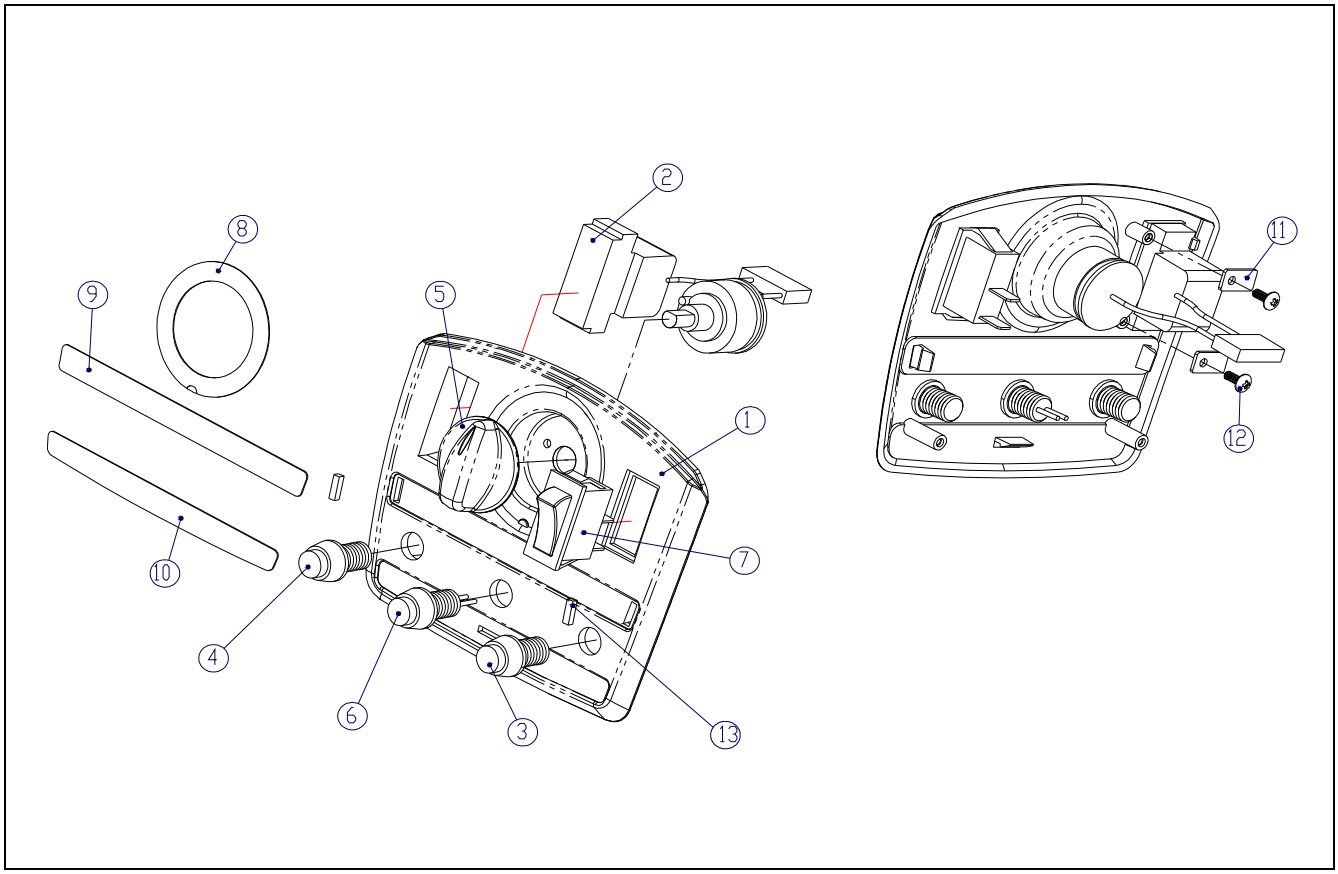
Pos	Article number	Units	Description	
1	1001334	1	Console top cover	
2	1001335	1	Head light assy	
3	1001336	1	Head light seal	
4	264.00121.000	4	Head light DC24 3W	
-	161.00171.000	1	Console top cover assy	

004: CONSOLE BOTTOM COVER ASSY



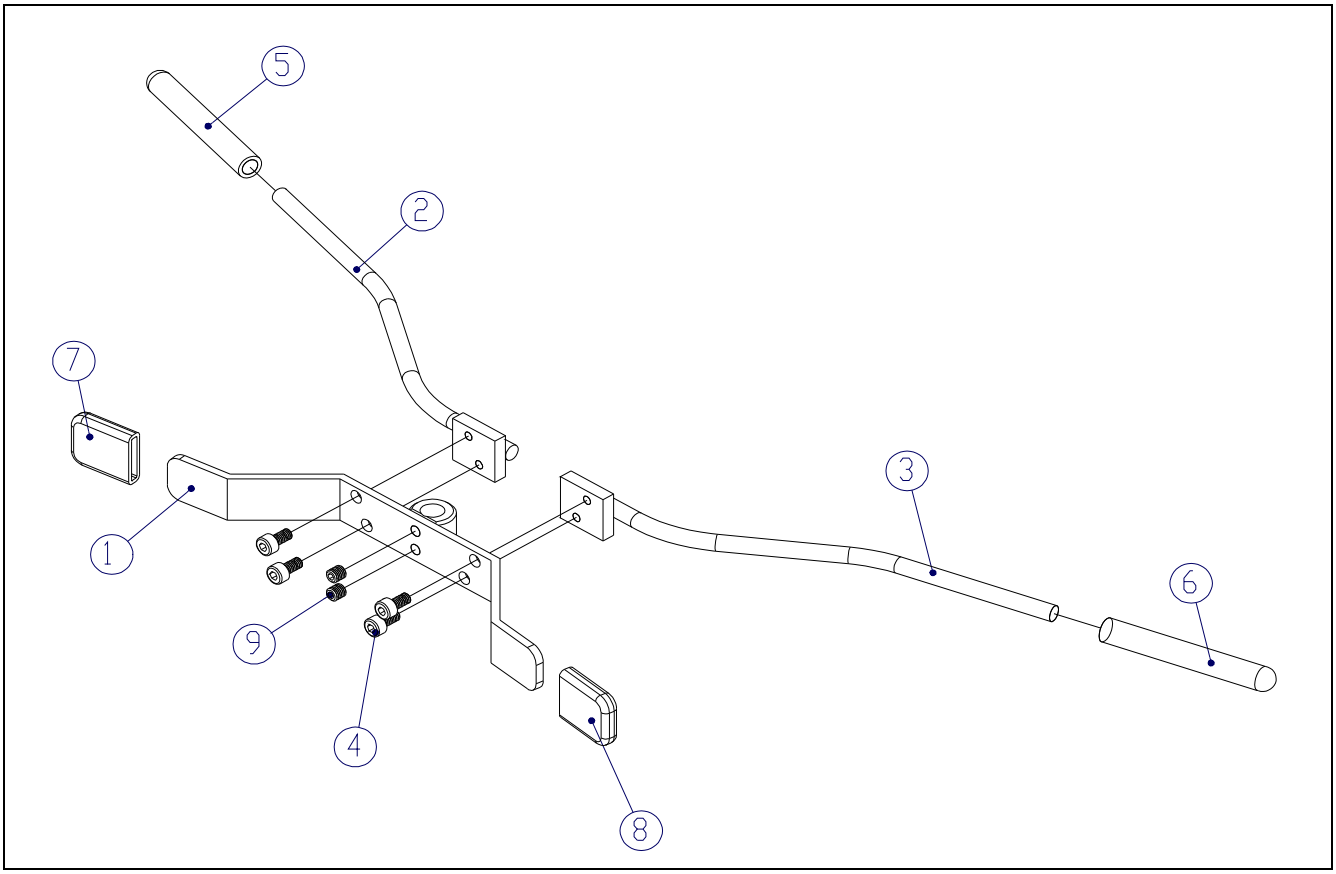
Pos	Article number	Units	Description	
1	1001321	1	Console bottom cover	
2	9003156	1	Potentionmeter cable assy	
3	1001323	2	Screw 4,2x12mm	
4	1001208	1	PCB tiller	
5	1001324	4	Screw 2,9x8mm	
6	1001325	1	Horn	
7	1001326	2	Front indicator assy	
8	1001327	2	Toggle switch wire assy	
9	1001328	1	Key switch wire assy	
10	1001329	1	Console fuse wire assy	
11	008.00000.481	2	Label "indicator arrows"	
12	1001281	2	Bulb DC24V 5W T9.5	
13	1001331	1	Fuse 2A glass	
14	1001332	1	Head light extend wire assy	
15	1001333	2	Console indicator assy	
16	No spare part	2	Plastic washer	
-	161.00151.000	1	Console bottom cover assy	
-	1001372	1	Contact key	

005: CONSOLE PANEL ASSY



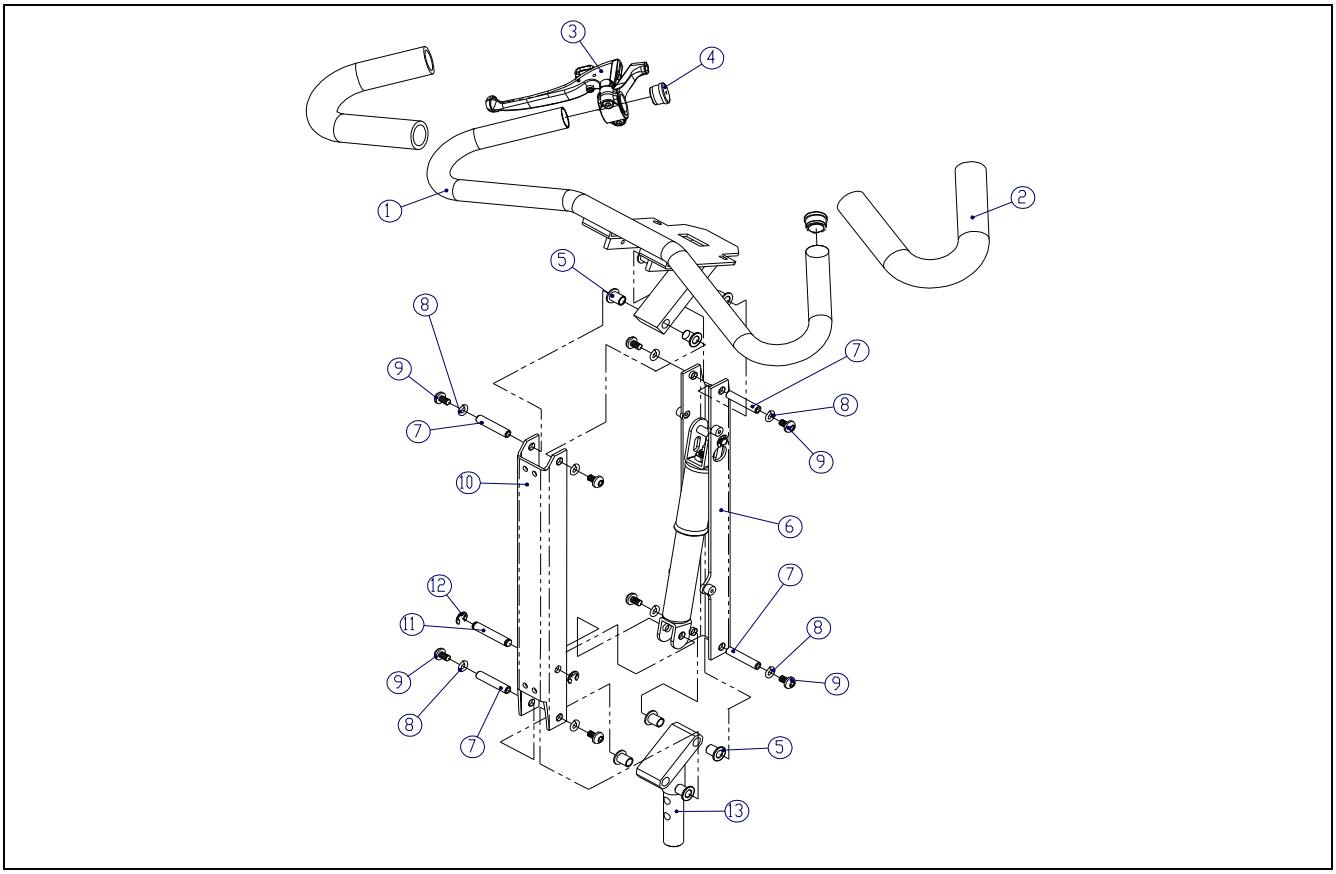
Pos	Article number	Units	Description	
1	1001337	1	Console panel cover	
2	1001338	1	Battery indicator + speedswitch (Solo)	
	9003087	1	Battery indicator + speedswitch (S-Drive)	
3	1001340	1	Horn switch cable assy	
4	1001340	1	Horn switch cable assy	
5	1001341	1	Speed knob	
6	1001342	1	Warning light control assy	
7	1001343	1	Head light switch cable assy	
8	008.00000.601	1	Label Speed selector	
9	008.00000.611	1	Label console upper	
10	008.00000.621	1	Label console lower	
11	1001344	2	Battery meter bracket	
12	1001345	2	Screw M2,9x8mm	
13	1001346	2	Stuff inserts the panel	
-	161.00161.000	1	Console panel assy (Solo)	
-	1009683	1	Console panel assy (S-Drive)	

006: WIG-WAG ASSY



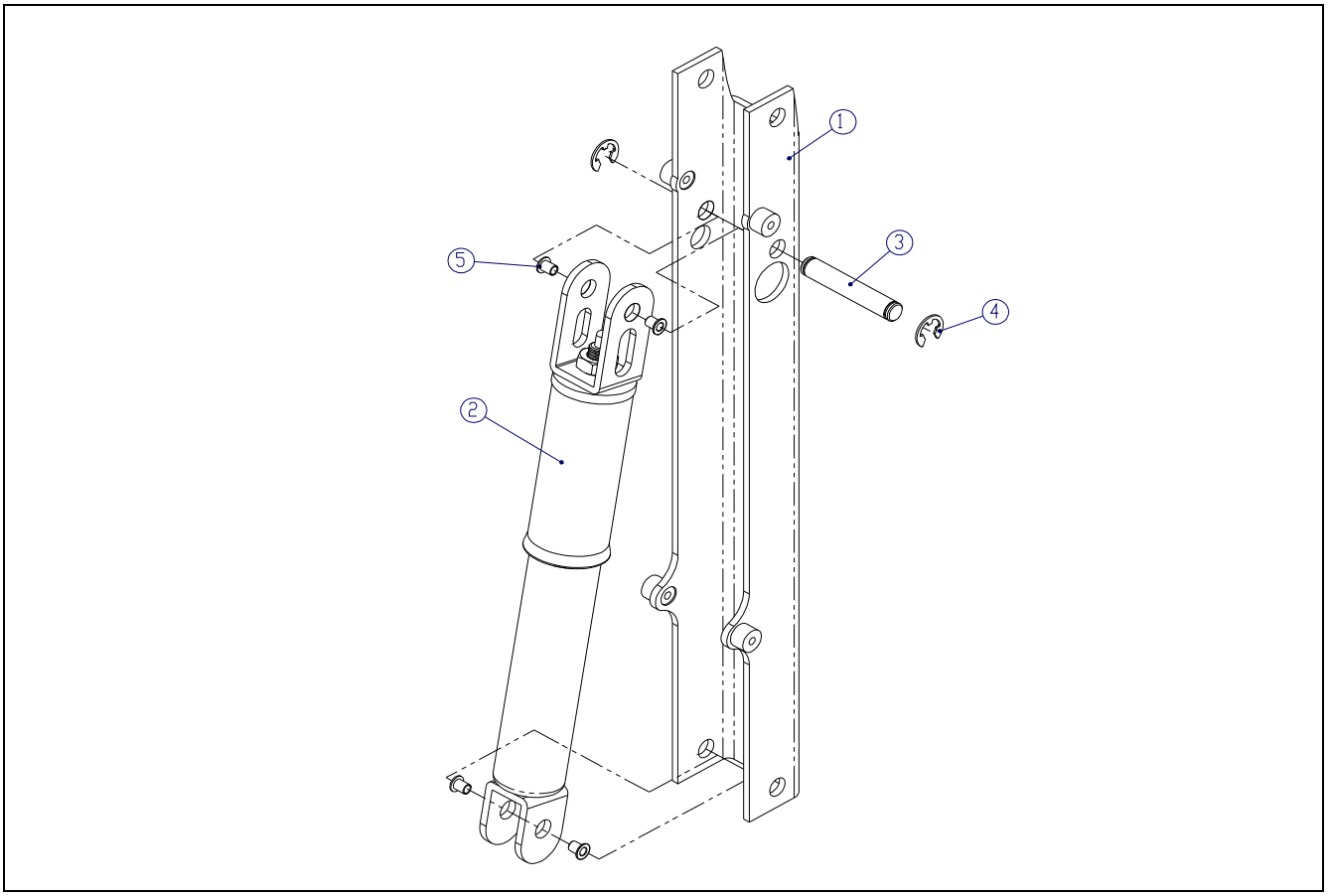
Pos	Article number	Units	Description	
1	No spare part	1	Wig-wag	
2	No spare part	1	Finger control (LH)	
3	No spare part	1	Finger control (RH)	
4	No spare part	2	Screw M4xP0.7x8L black	
5	1001355	1	Plastic tip finger (LH) (Green)	
6	1001356	1	Plastic tip finger (RH) (Yellow)	
7	9003092	1	Plastic tip thumb (LH) (Yellow)	
8	9003093	1	Plastic tip thumb (RH) (Green)	
9	00000.3503	2	Set screw M5xP0.8x5L	
-	9003155	1	Wig-Wag assy	

007: TILLER ASSY



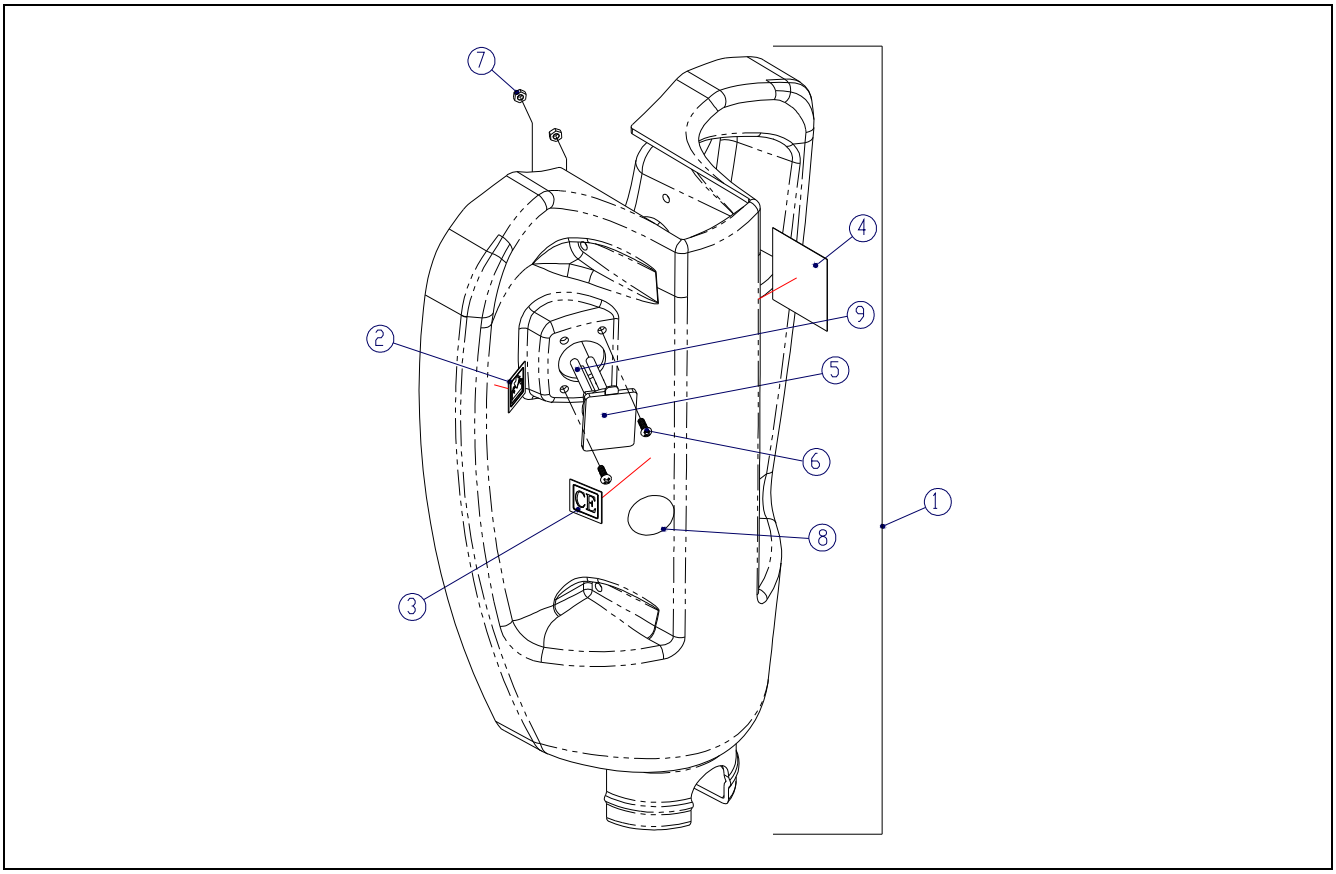
Pos	Article number	Units	Description	
1	9003091	1	Handle	
2	125.00031.000	2	Hand grip (foam)	
3	108.00281.000	1	Brake handle	
4	00000.9002	2	Plug for hand grip 22x2	
5	1001313	8	Pivot bush	
6	1001308	1	Channel front assy	
7	1001315	4	Pivot pin	
8	1001316	8	Spring washer black	
9	1001317	8	Screw M6xP1.0x10L black	
10	1001318	1	Channel back	
11	1001311	1	Pivot pin	
12	00000.1402	2	Clip E7	
13	1001320	1	Bottom mounting block of tiller	
-	9003154	1	Tiller assy	

008: CHANNEL FRONT ASSY



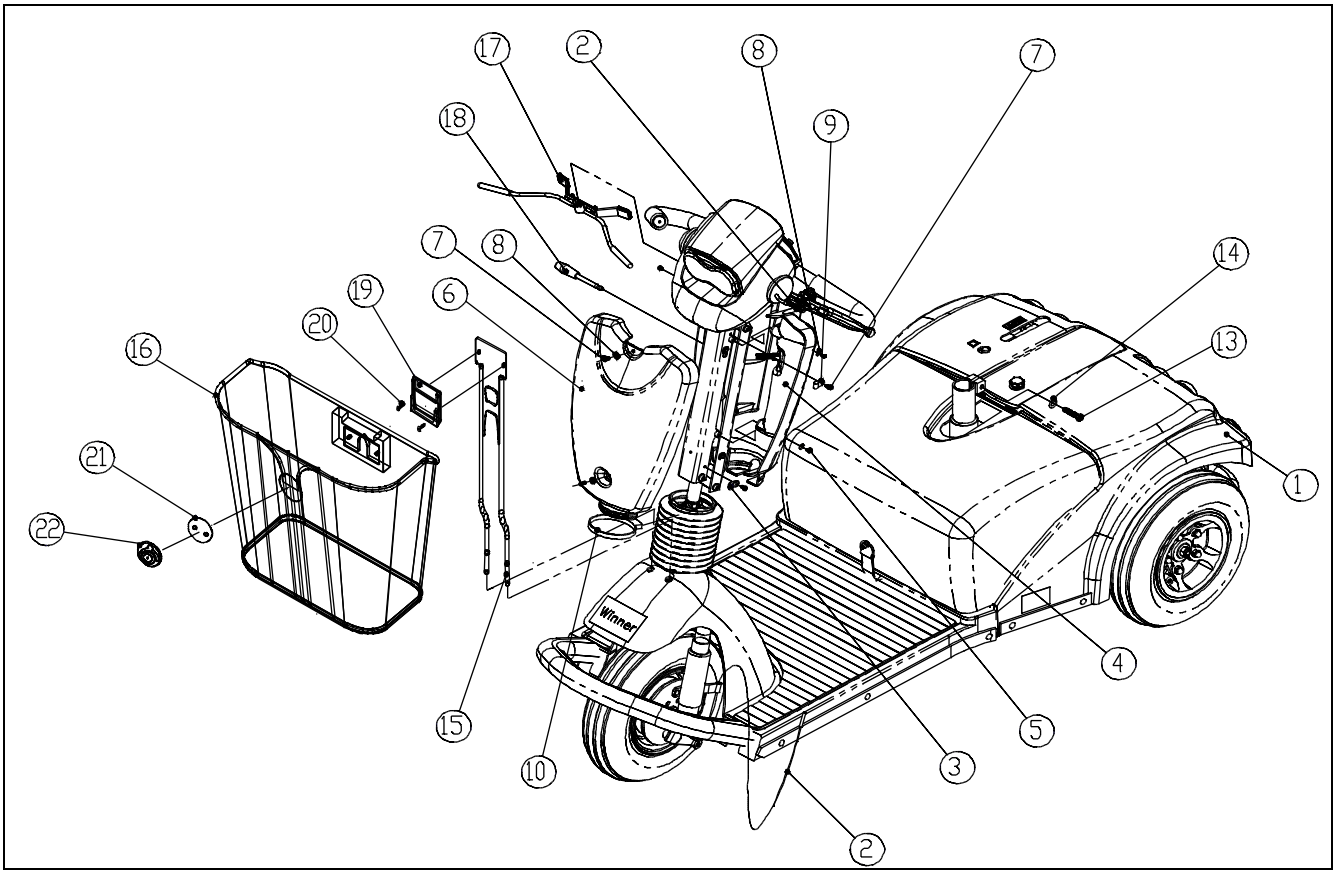
Pos	Article number	Units	Description	
1	1001309	1	Channel front	
2	1001310	1	Gas spring	
3	1001311	1	Pivot pin	
4	00000.1402	2	Clip E7	
5	1001312	4	Bush	

009: BACK TILLER SHROUD ASSY



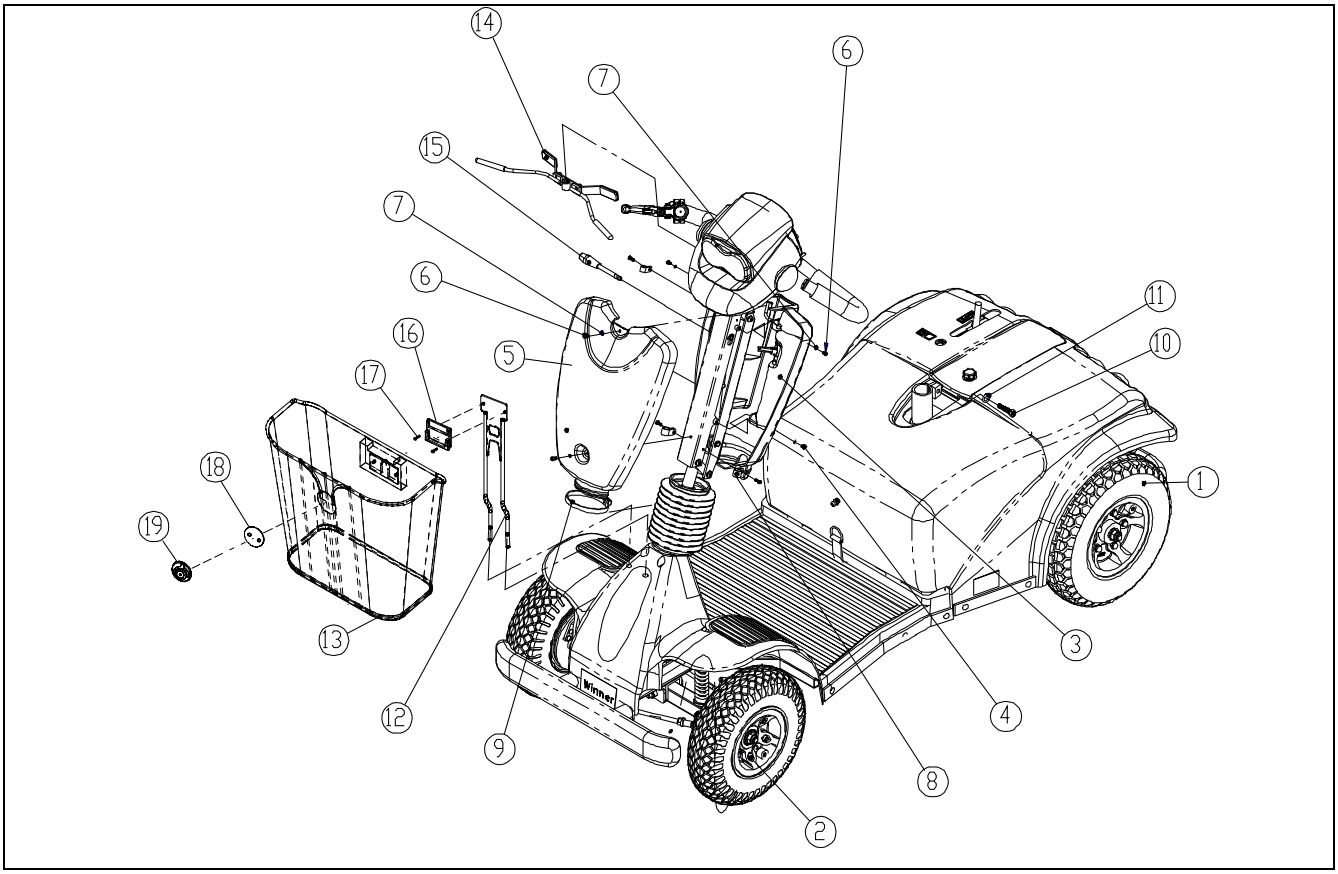
Pos	Article number	Units	Description	
1	1011153	1	Back tiller shroud assy (Solo)	
	1009684	1	Back tiller shroud assy (S-Drive)	
2	008.00000.391	1	Label "charger"	
3	00001.1347	1	Label "CE"	
4	008.00000.371	1	Label "tiller adjust"	
5	1001361	1	Charger plug cable assy (Solo)	
	9003485	1	Charger plug cable assy (S-Drive) (15A)	
-	9003484	1	Charger plug cover	
6	1001286	2	Screw M3xP0.5x10L	
7	00000.1506	2	Nut M3xP0.5	
8	No spare part	1	Label "charger set"	

010: SCOOTER ASSY (3W)



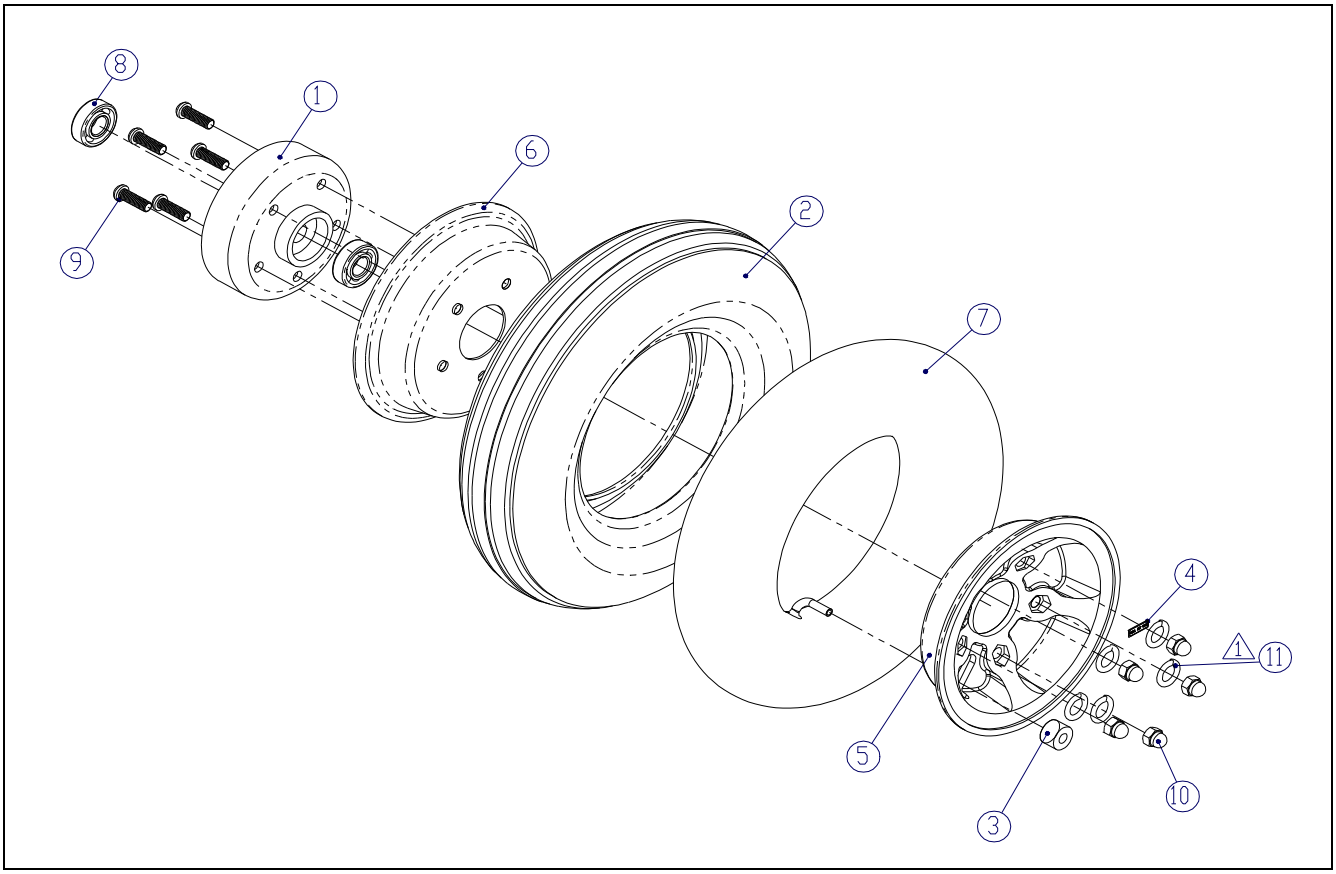
Pos	Article number	Units	Description	
1	No spare part	1	3W Scooter pro assy	
2	108.00291.000	1	Brake cable assy	
3	00000.7718	1	P-clip ACC-4	
4	1011153	1	Back tiller shroud assy (Solo)	
	1009684	1	Back tiller shroud assy (S-Drive)	
5	1001365	4	Screw M4xP0.7x6L black	
6	052.00342.000	1	Front cover of tiller	
7	1001366	6	Screw M4xP0.7x10L black	
8	1001367	6	Flat washer W4 black	
9	1254	3	P-clip ACC-3	
10	1001368	1	Hose clamp	
11	No spare part	-	X	
12	No spare part	-	X	
13	00000.4134	1	Screw M8xP1.25x35L	
14	00000.2203	1	Spring washer M8	
15	9000812	1	Basket holder	
16	9001135	1	Basket	
17	9003155	1	Wig-wag assy	
18	1001370	1	Tiller lever	
19	9000704	1	Basket lock	
20	00000.3612	2	Bolt M4*10	
21	9000872	1	Tape	
22	9002232	1	Handicare logo	

011: SCOOTER ASSY (4W)



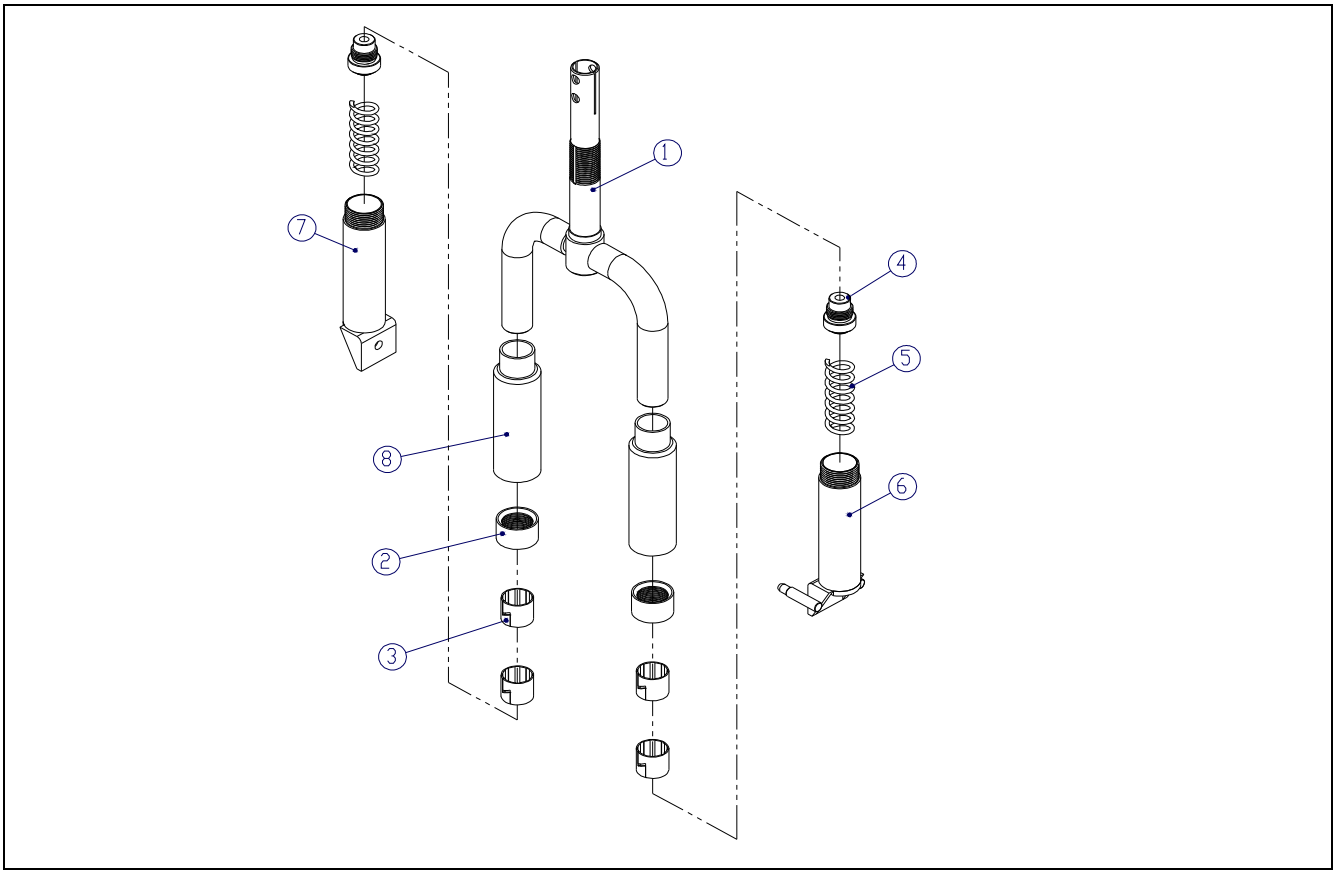
Pos	Article number	Units	Description	
1	170.00352.000	1	Rear wheel assy	
2	1004591	1	Front wheel assy	
3	1011153	1	Back tiller shroud assy (Solo)	
	1009684	1	Back tiller shroud assy (S-Drive)	
4	1001365	4	Screw M4*P0.7*6mm	
5	052.00342.000	1	Tiller cover assy front	
6	1001366	6	Screw M4*P.07*10mm	
7	1001367	6	Washer Ø3*Ø6*0.5t	
8	1254	4	P-clip	
9	1001368	1	Hose clamp	
10	00000.4134	1	Bolt M8*P1.25*35mm	
11	00000.2203	1	Spring washer M8	
12	9000812	1	Basket holder	
13	9001135	1	Basket	
14	9003155	1	Wig-wag assy	
15	1001370	1	Tiller lever	
16	9000704	1	Basket lock	
17	00000.3612	2	Bolt M4x10	
18	9000872	1	Tape	
19	9002232	1	Handicare logo	
-	1009813	1	Brake cable assy 4W	

012: FRONT TIRE ASSY (3W)



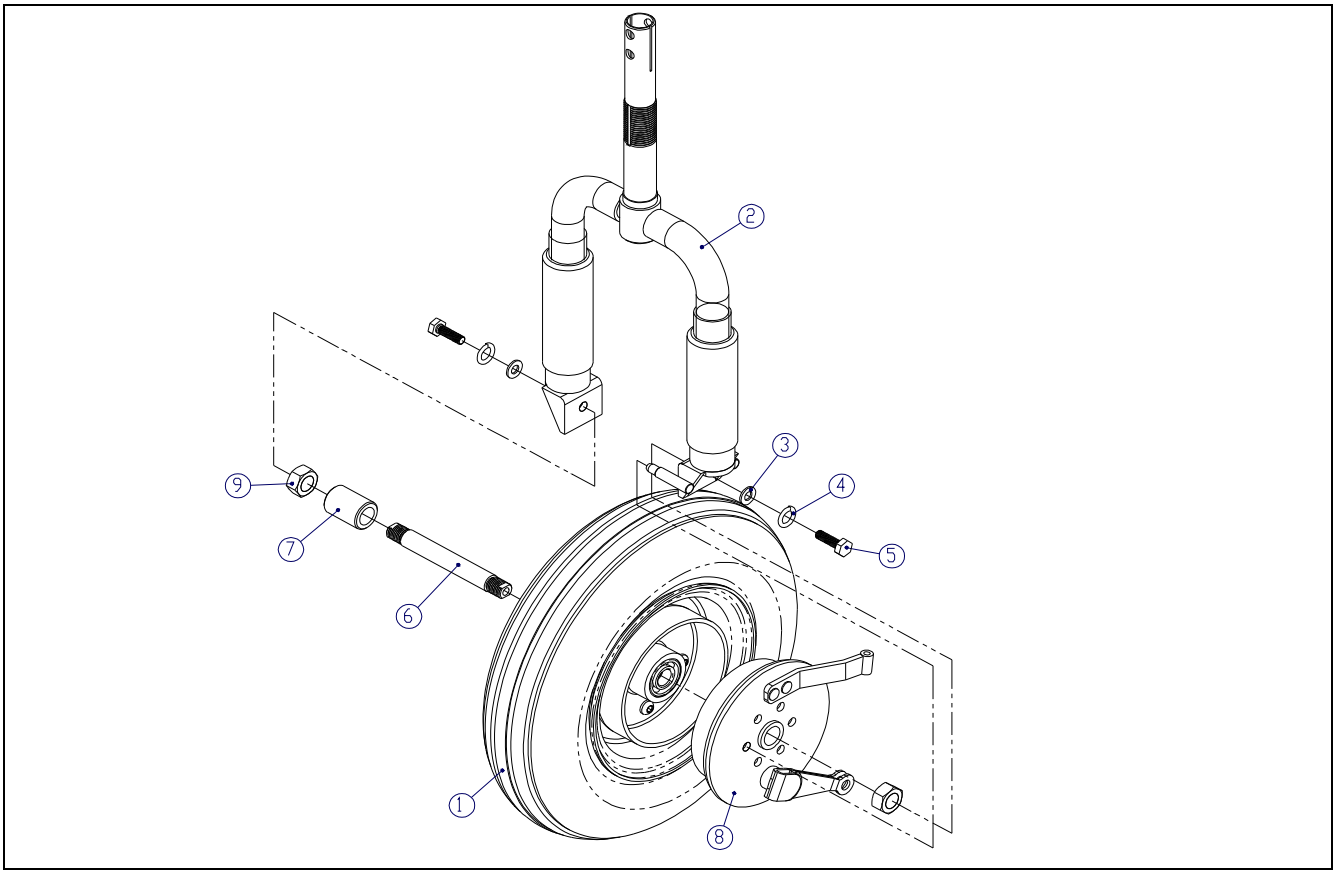
Pos	Article number	Units	Description	
1	176.00182.000	1	Brake hub	
2	172.00062.000	1	Outer tire 4.10x3.50x6"	
3	176.00191.000	1	Spacer Bush	
4	00001.1462	1	Label max 2.7 bar	
5	173.00052.000	1	Outer Rim 6"	
6	173.00042.000	1	Inner Rim 6"	
7	171.00021.000	1	Tube Inner with Cap	
8	015.07030.001	2	Bearing 6202/2RS	
9	00000.3706	5	Screw M8xP1.25x25L	
10	00000.1802	5	Nut M8xP1.25	
11	00000.2203	5	Spring washer SW8	
-	170.00342.000	1	Front tyre assy (3W)	

013: FRONT FORK (3W)



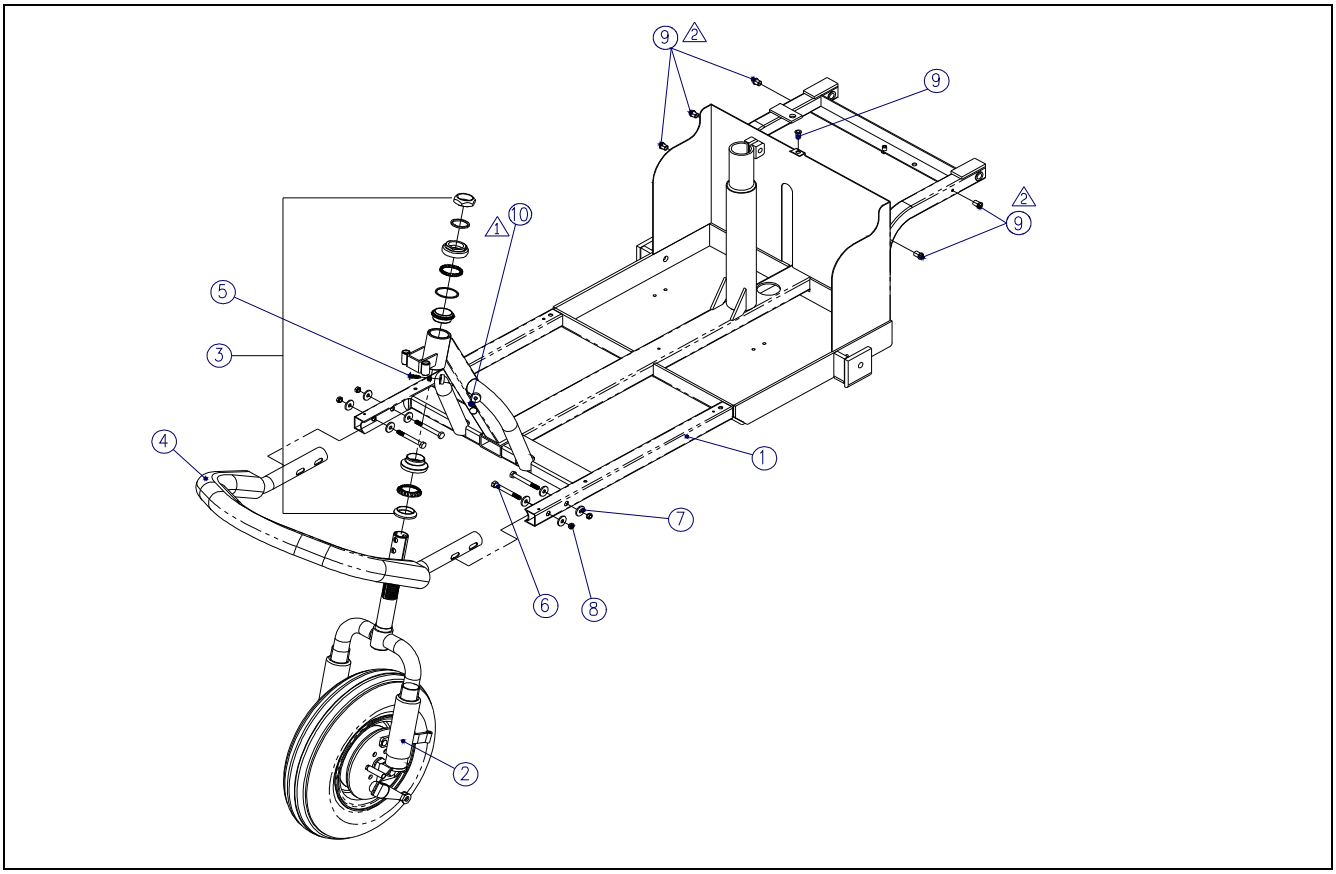
Pos	Article number	Units	Description	
1	No spare part	1	Fork Weldment	
2	No spare part	2	Tube cap	
3	No spare part	4	Nylon bearing	
4	No spare part	2	Spring stopper	
5	No spare part	2	Compression Spring	
6	No spare part	1	Lower tube weldment (LH)	
7	No spare part	1	Lower tube weldment (RH)	
8	No spare part	2	Dust cap	
-	110.00022.000	1	Front fork (3W)	

014: FRONT FORK ASSY (3W)



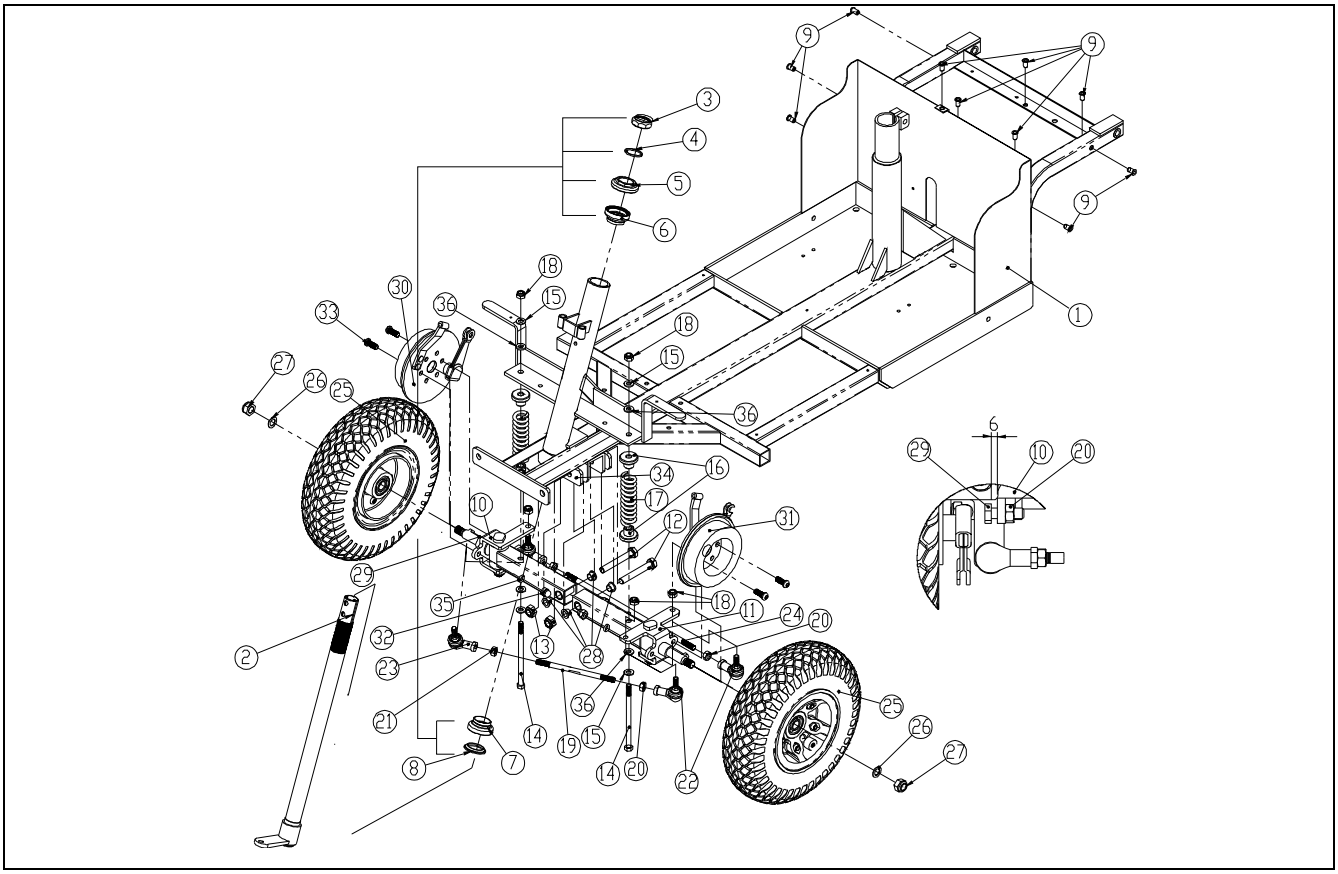
Pos	Article number	Units	Description	
1	170.00342.000	1	Front wheel assy (3W)	
2	110.00022.000	1	Front fork assy	
3	00000.2003	2	Flat washer M8	
4	00000.2203	2	Spring washer M8	
5	1009325	2	Bolt M8x25 (10.9)	
6	176.00172.000	1	Axle for front wheel	
7	176.00251.000	1	Collar for front wheel	
8	108.00271.000	1	Break assy for front wheel	
9	1001257	2	Nut M14xP1.5	

015: FRONT FRAME ASSY (3W)



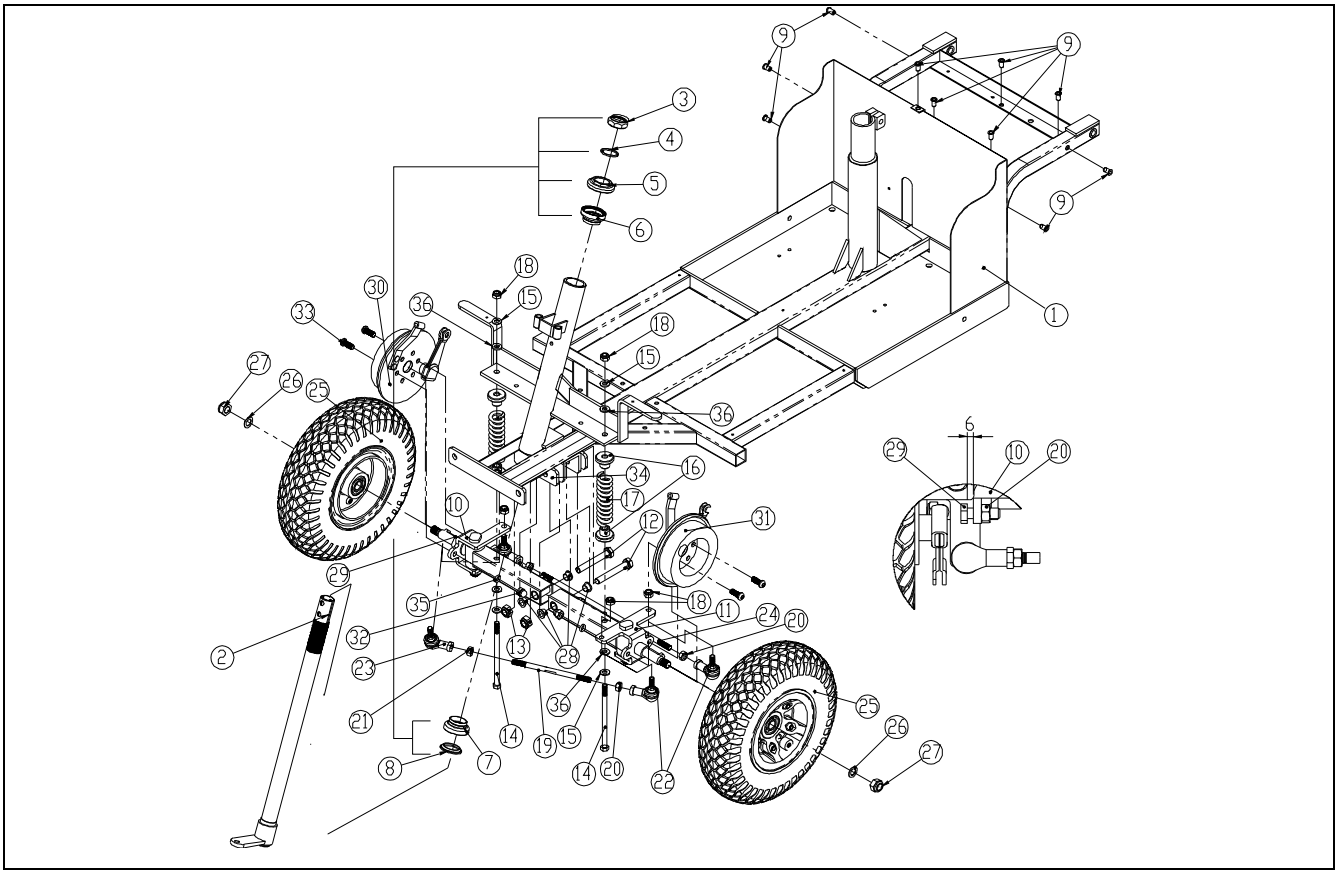
Pos	Article number	Units	Description	
1	110.00072.000	1	Front frame weldment	
2	No spare part	1	Front fork & wheel assy	
3	015.07010.002	1	Head set	
4	126.00011.000	1	Front bumper	
5	No spare part	2	Snap button	
6	00000.4104	4	Screw M6xP1.0x55L	
7	00000.2002	8	Flat washer W6	
8	00000.1701	4	Lock nut M6xP1.0	
9	1001261	6	Nut-inserts	
10	No spare part	-	X	

016: FRONT FRAME ASSY (4W)



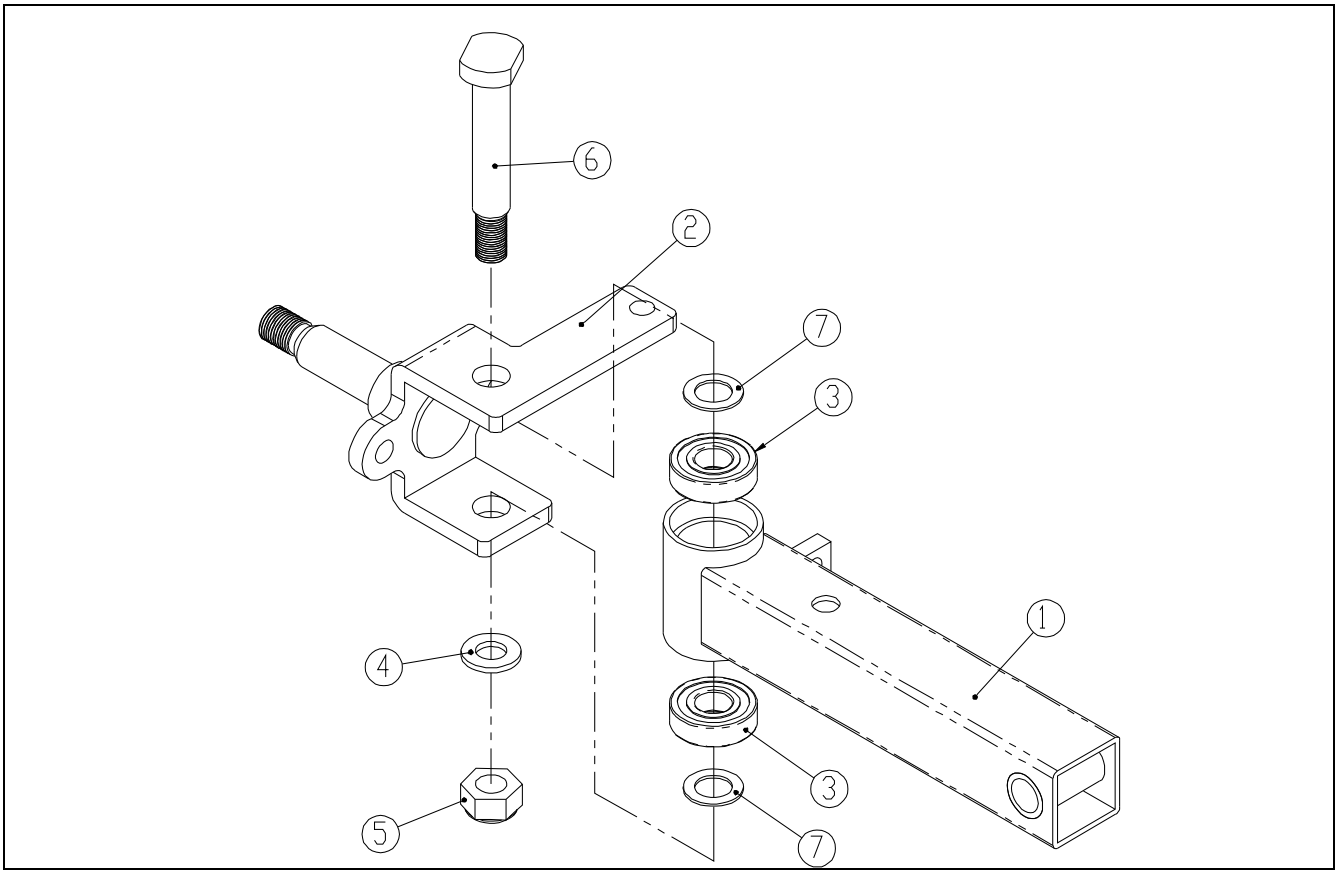
Pos	Article number	Units	Description	
1	1004626	1	Frontframe 4w weldment	
2	1004581	1	Steering tube	
3-8	015.07010.002	1	Head set	
9	1001261	10	Insert	
10	1004582	1	Knuckle RHS	
11	1004583	1	Knuckle LHS	
12	00000.4110	2	Bolt M10xP1.5*70mm	
13	00000.1703	2	Nut M10*P1.5	
14	001.03010.003	2	Bolt M8*P1.25*125mm	
15	00000.2103	4	Washer Ø8*Ø16*1.5	
16	1004584	4	Plug Ø30*20mm	
17	1004585	2	Spring Ø26.5*Ø16.5*94.5mm	
18	00000.1702	6	Nut M8*P1.25	
19	1004586	1	Rod Ø8*140mm	
20	1004597	4	Nut (rod) M8*P1.25	
21	1004598	2	Nut (rod) M8*P1.25	
22	1004588	2	Bearing (rod)	
23	1004589	2	Bearing (rod)	
24	1004587	1	Rod Ø8*300mm	

016: FRONT FRAME ASSY (4W)



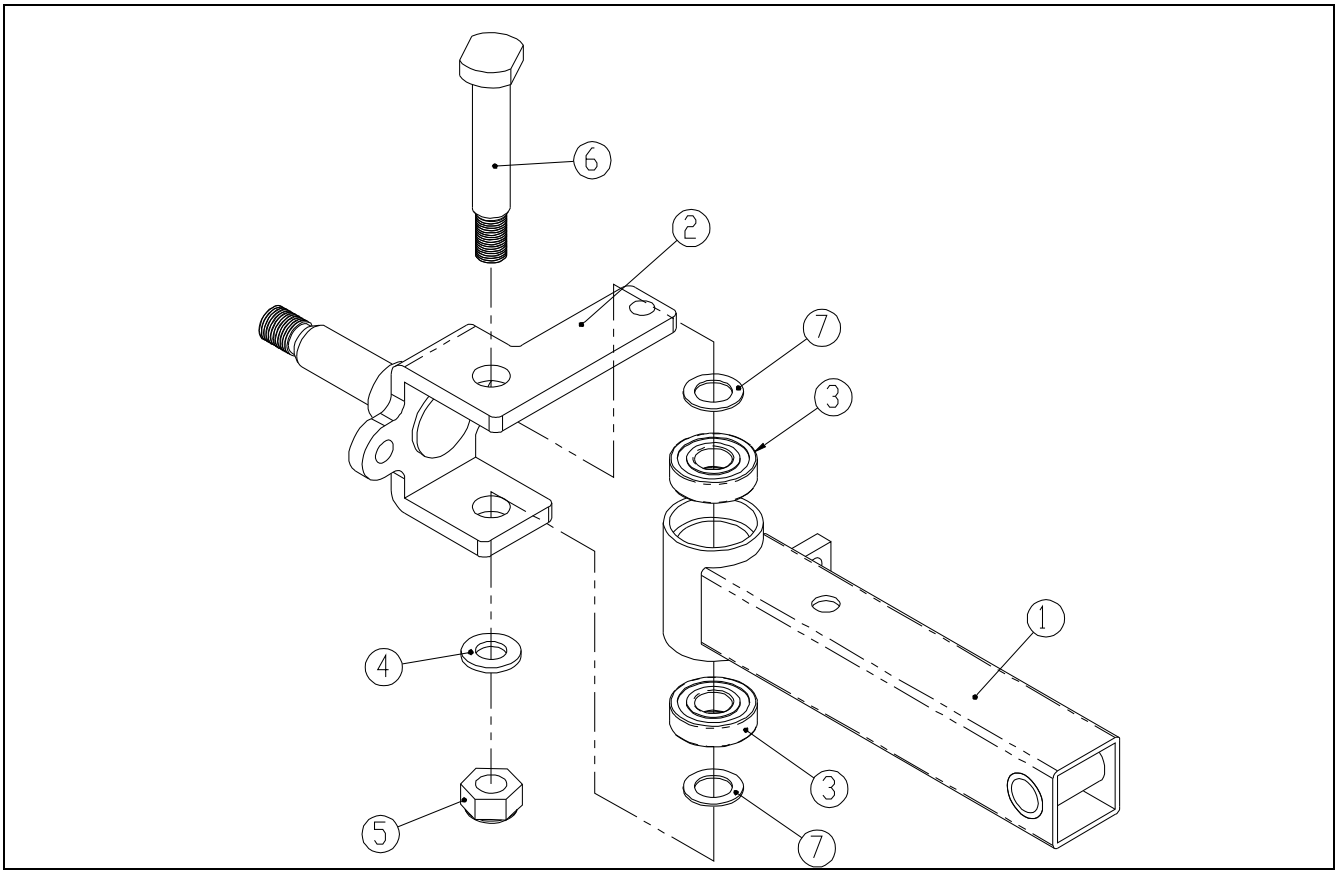
Pos	Article number	Units	Description	
25	1004591	2	Front wheel assy	
26	00000.2005	2	Washer Ø12*Ø19*1.0	
27	00000.1703	2	Lock nut M12*P1.75	
28	1004593	4	Bush Ø16*8mm	
29	00000.4135	2	Bolt M8*P1.25*25mm	
30	1004594	1	Brake assy RHS	
31	1004595	1	Brake assy LHS	
32	00000.1502	4	Nut M8*P1.25	
33	00000.4311	4	Bolt M8*P1.25*20mm	
34	1004596	2	Strip 5t*30*100	
35	00000.2203	4	Spring Washet M8 SW8	
36	00000.2103	4	Washer Ø8*Ø16*2.0t	

017: KNUCKLE RHS ASSY (4W)



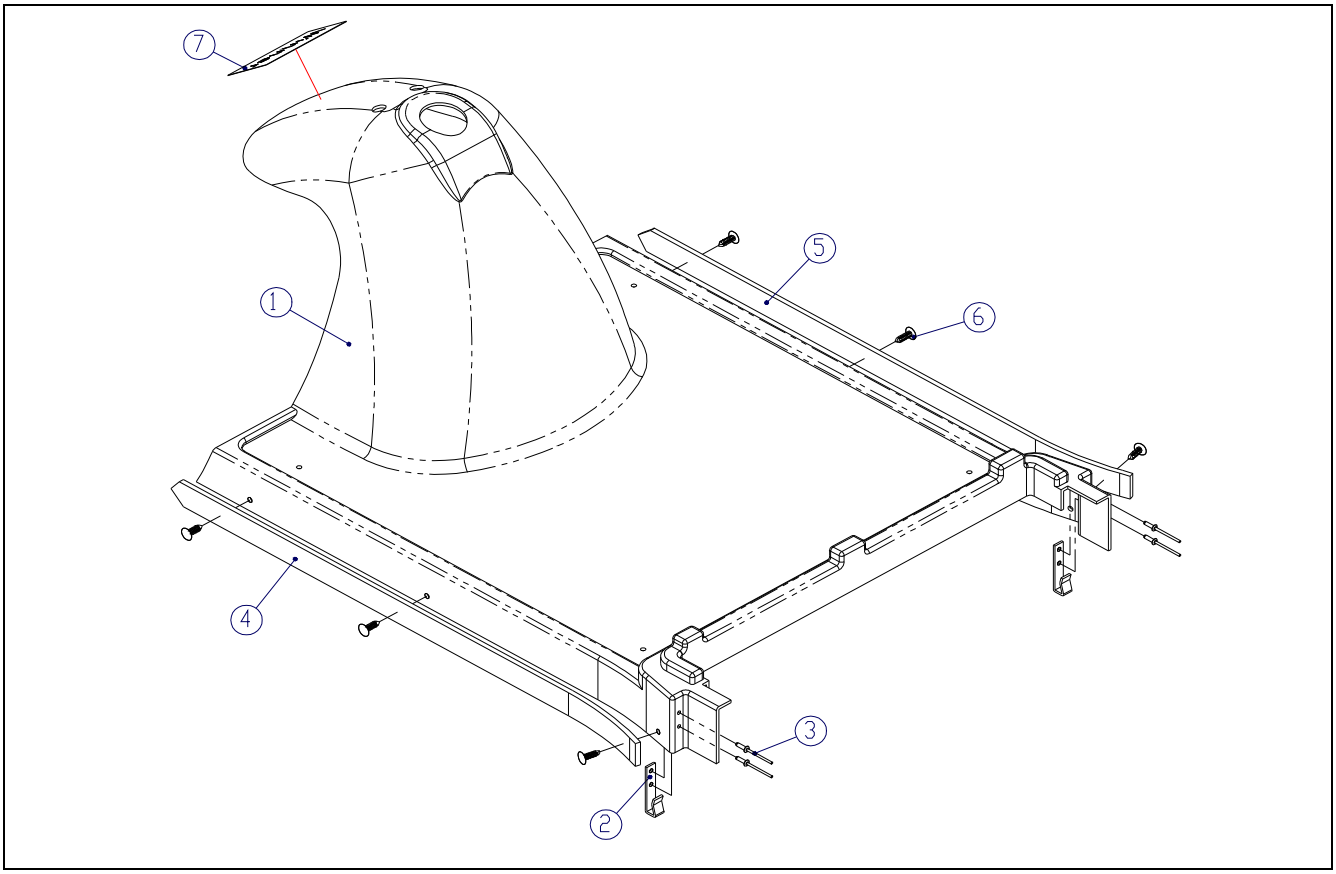
Pos	Article number	Units	Description	
1	1004599	1	Bracket	
2	1004600	1	Knuckle	
3	1004601	2	Ball bearing	
4	00000.2003	1	Washer M8	
5	00000.1702	1	Nut M8*P1.5	
6	1004602	1	Bolt M8*P1.5	
7	1004603	2	Washer	
-	1004582	1	Knuckle RHS assy (4W)	

018: KNUCKLE LHS ASSY (4W)



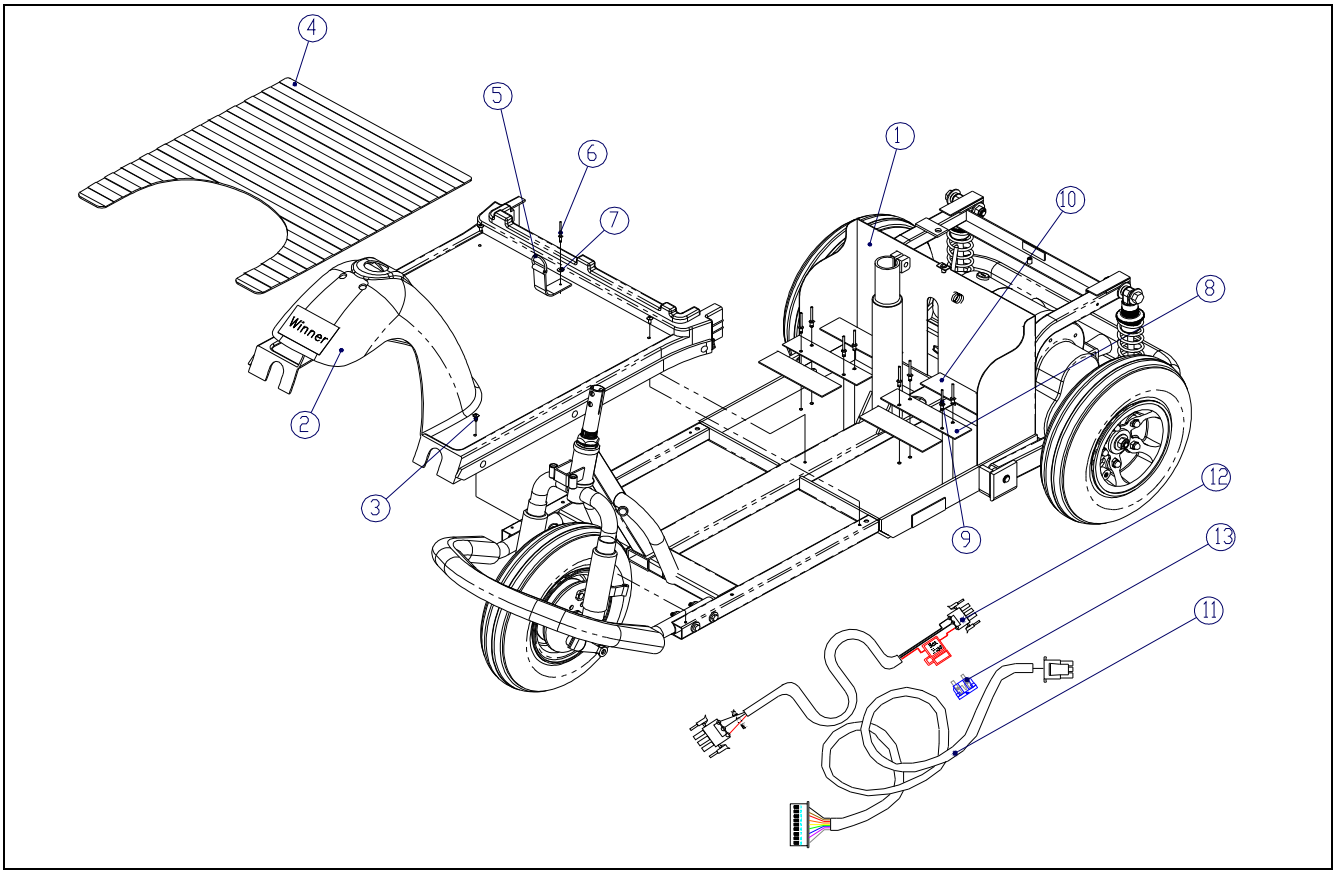
Pos	Article number	Units	Description	
1	1004604	1	Bracket	
2	1004605	1	Knuckle	
3	1004601	2	Ball bearing	
4	00000.2003	1	Washer M8	
5	00000.1702	1	Nut M8*P1.5	
6	1004602	1	Bolt M8*P1.5	
7	1004603	2	Washer	
-	1004583	1	Knuckle LHS assy (4W)	

019: FLOORPAN ASSY (3W)



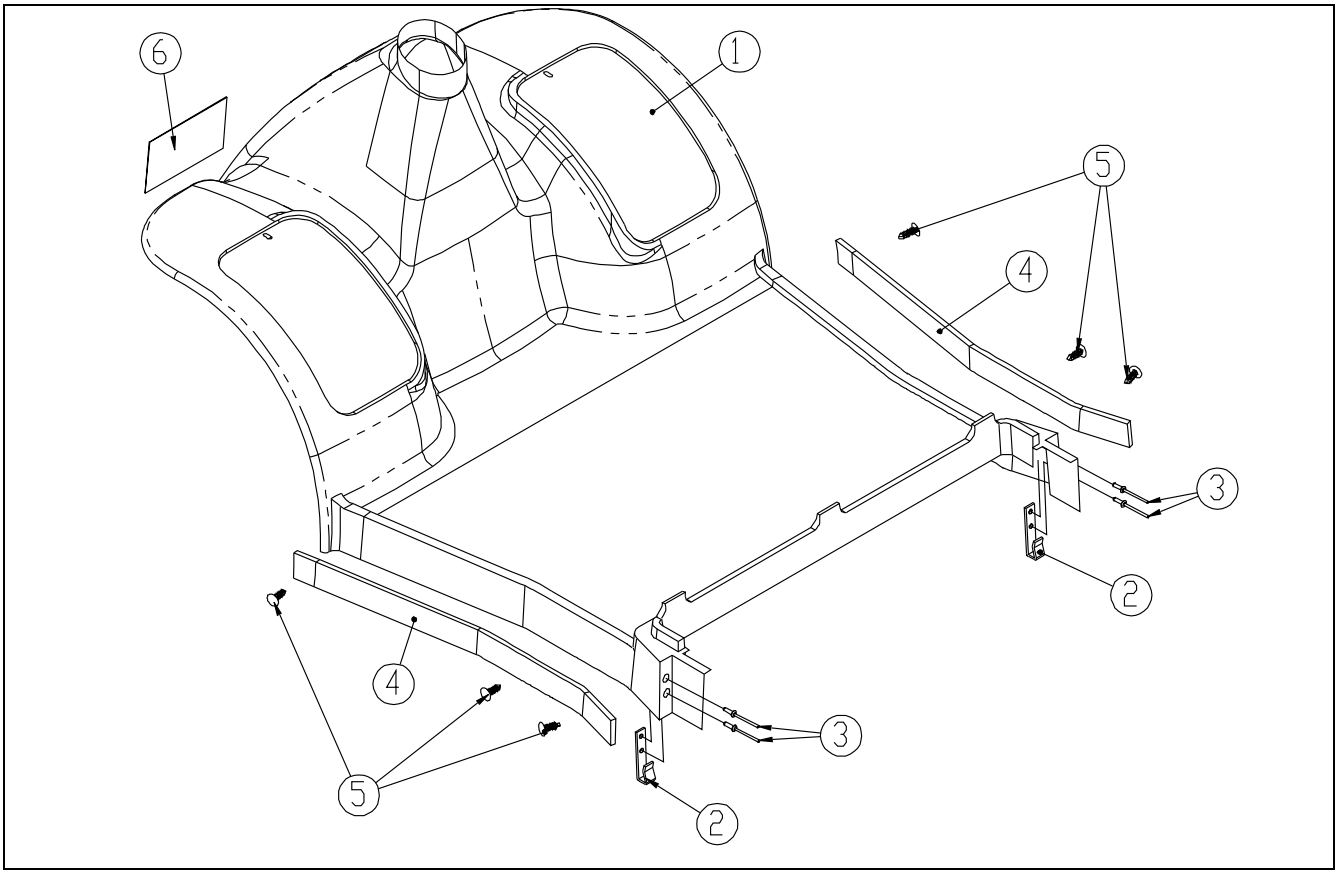
Pos	Article number	Units	Description	
1	No spare part	1	Front cover 3w	
2	1001273	2	Shroud "J" bracket	
3	00001.1110	4	Rivet pop	
4	126.00032.000	1	Bumper trim (LH)	
5	126.00042.000	1	Bumper trim (RH)	
6	001.15010.002	6	Snap button	
7	008.00000.401	1	Label "Winner"	
-	1012256	1	Floorpan assy (3W) with floor mat	

020: SCOOTER ASSY (3W)



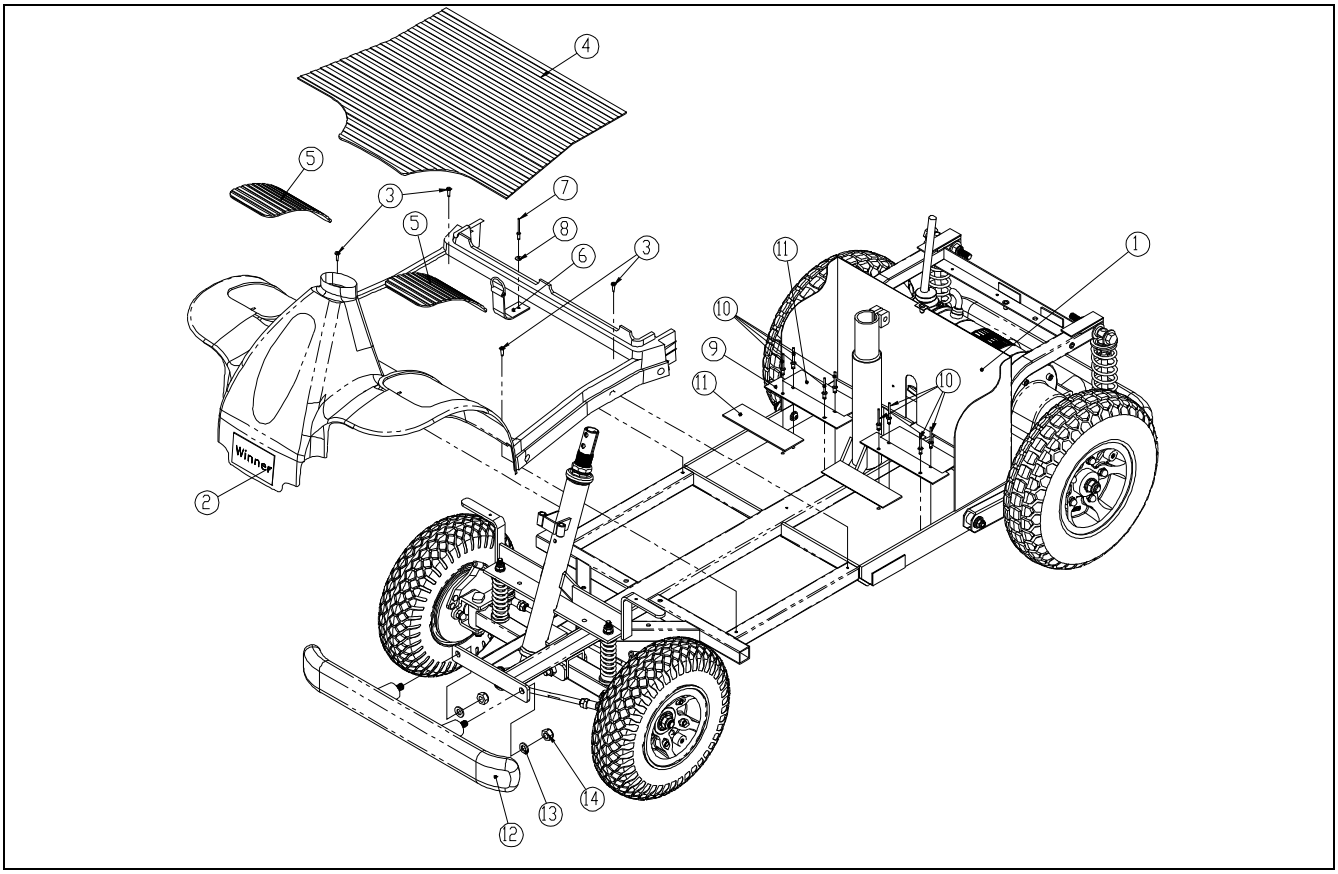
Pos	Article number	Units	Description	
1	No spare part	1	Body frame assy	
2	1012256	1	Front floorpan assy with floor mat	
3	00000.3304	4	Screw 4,2x16	
4	257.00001.000	1	Floor mat 3w	
5	1001276	1	Holding Elastic Band	
6	00001.1110	1	Rivet pop 4-4	
7	00000.2108	1	Flat washer W3	
8	138.00011.000	2	Battery strap	
9	001.15010.001	8	Rivet pop 6-3	
10	1001277	4	Battery mat	
11	1001385	1	Main wire (Solo)	
	9003107	1	Main wire (S-Drive)	
12	055.00401.000	1	Charger extend cable	
13	005.01210.000	1	Fuse 15A	

021: FLOORPAN ASSY (4W)



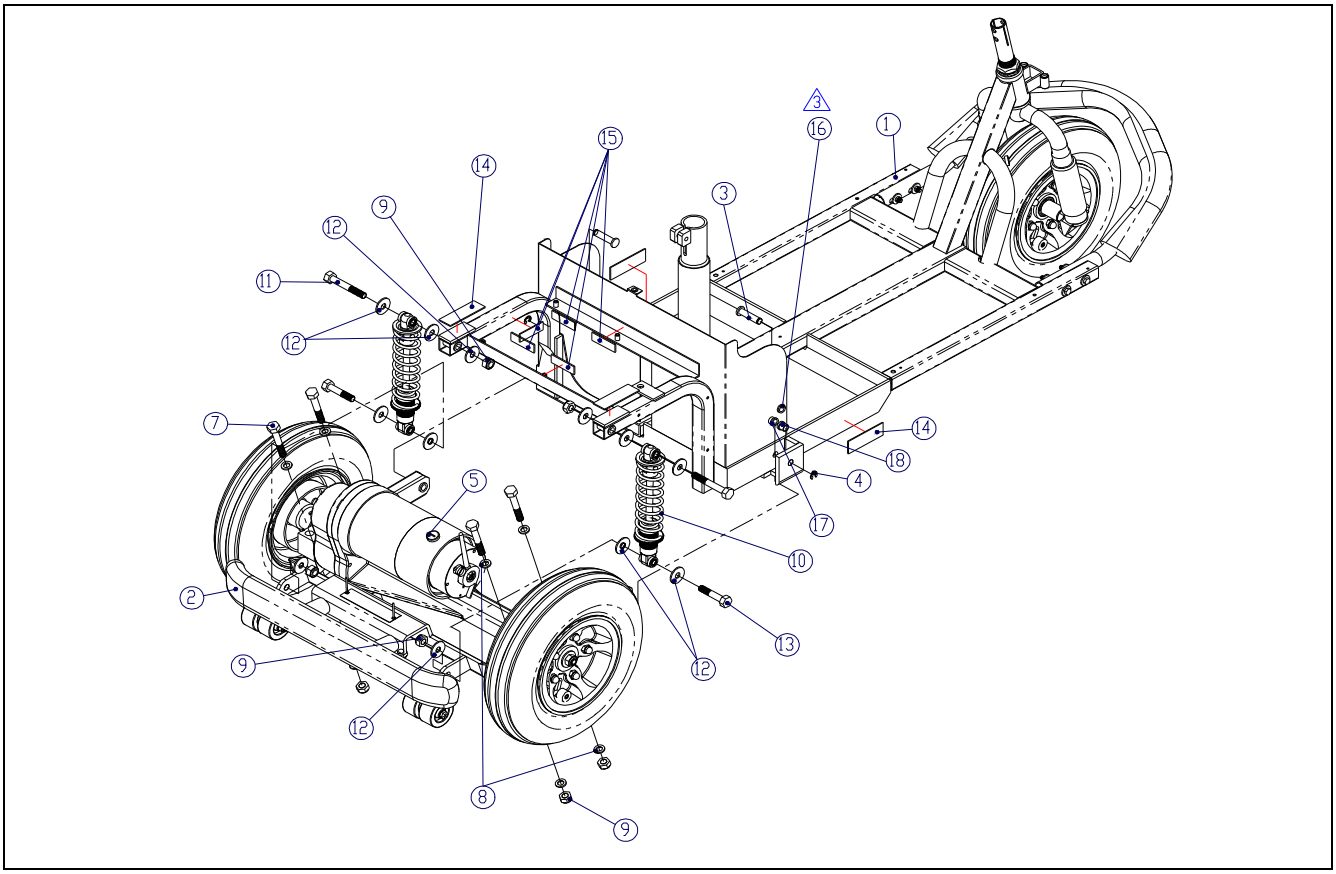
Pos	Article number	Units	Description	
1	1004579	1	Front cover	
2	1001273	2	Bracket 2t*10*80	
3	00001.1110	4	Pop rivet	
4	1004580	2	Side strip 5t*25*380L	
5	1004198	6	Snap button	
6	008.00000.401	1	Label "Winner"	
-	1004575	1	Floorpan assy (4W)	

022: SCOOTER ASSY (4W)



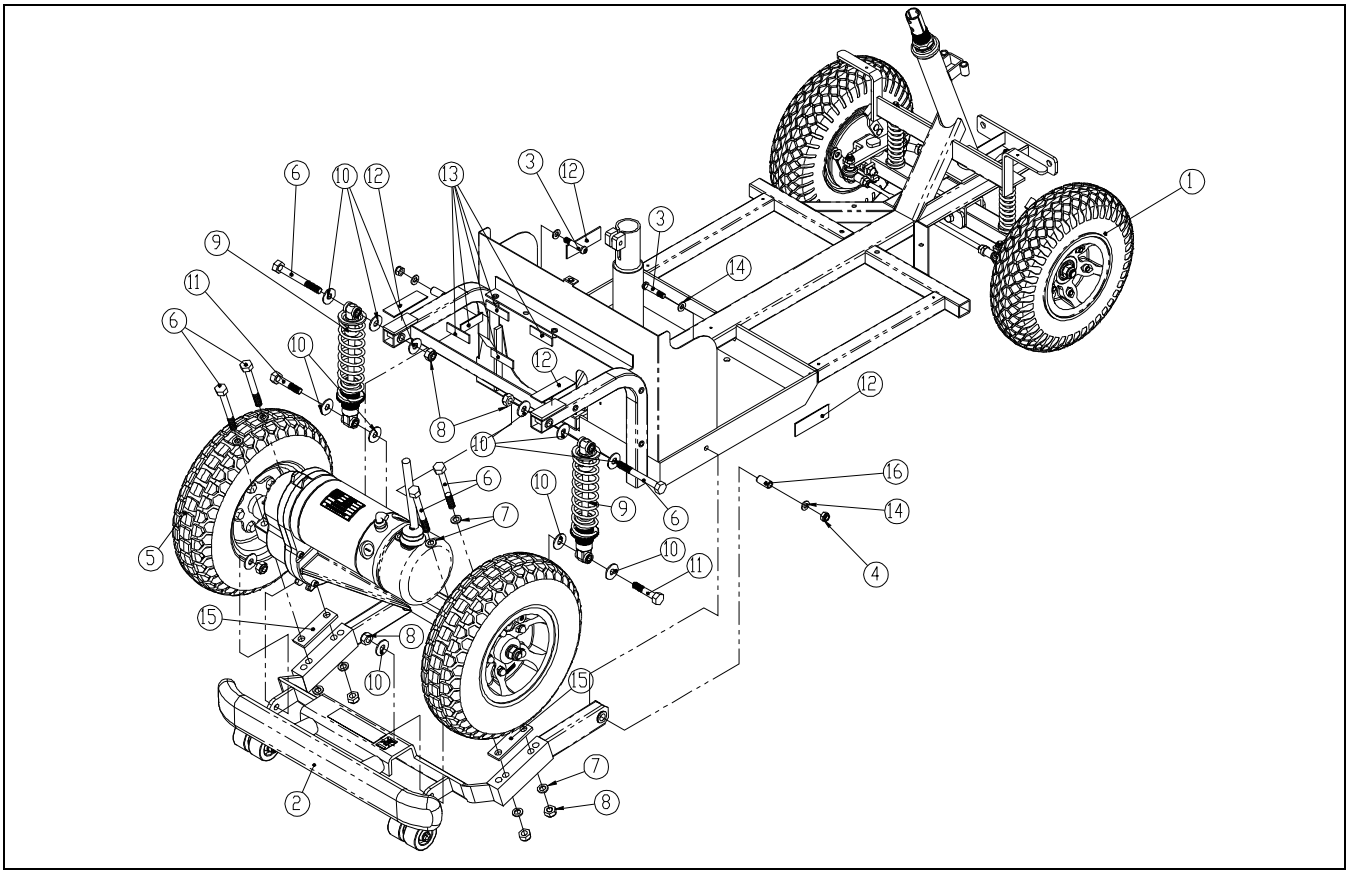
Pos	Article number	Units	Description	
1	No spare part	1	Main frame assy	
2	1004575	1	Front cover assy	
3	00000.3304	4	Screw M4*16mm	
4	1004576	1	Floor mat 3.0t*390*490	
5	1004577	2	Foot step 3.0t*107*188	
6	1001276	1	Elastic strap	
7	00001.1110	1	Pop rivet	
8	00000.2108	1	Washer M3	
9	138.00011.000	2	Battery strap 38mm*800mm	
10	001.15010.001	8	Pop rivet	
11	1001277	4	Battery mat 2.0t*45*145	
12	126.00021.000	1	Bumper front 4w	
13	00000.2004	2	Washer M10	
14	00000.1703	2	Nut M10*P1.5	

023: BODY FRAME ASSY (3W)



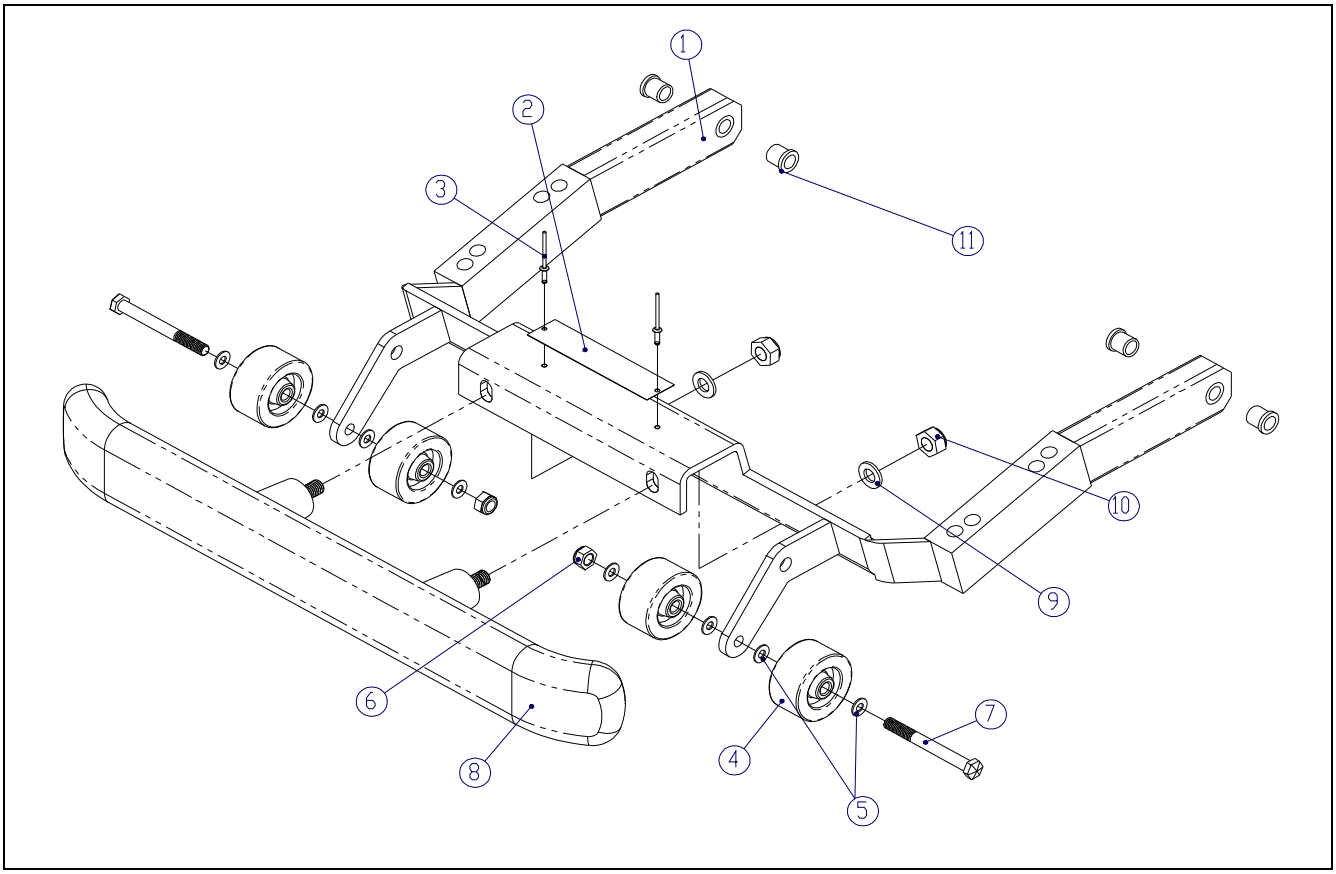
Pos	Article number	Units	Description	
1	No spare part	1	Front frame assy	
2	No spare part	1	Rear frame assy	
3	110.00141.000	2	Axle for rear frame	
4	00000.1402	2	Clip E7	
5	See 028 and 029	1	Transaxle assy	
6	No spare part	-	X	
7	1001266	4	Screw M10xP1.5x90L (for Schmid transaxle)	
	1012699	4	Screw M10xP1.5x100L (for CT transaxle)	
8	00000.2004	8	Flat washer M10	
9	00000.1703	4	Lock nut M10xP1.5	
10	013.00000.022	2	Shock absorber	
11	00000.4110	2	Screw M10xP1.5x70L	
12	00000.2104	12	Flat washer M10	
13	1001267	2	Screw M10xP1.5x50L	
14	1001268	4	Velcro-hooks	
15	1001269	5	Velcro-hooks	
16	00000.2004	2	Flat washer M10	
17	1001233	2	Bushing	
18	1001271	2	Bushing	

024: BODY FRAME ASSY (4W)



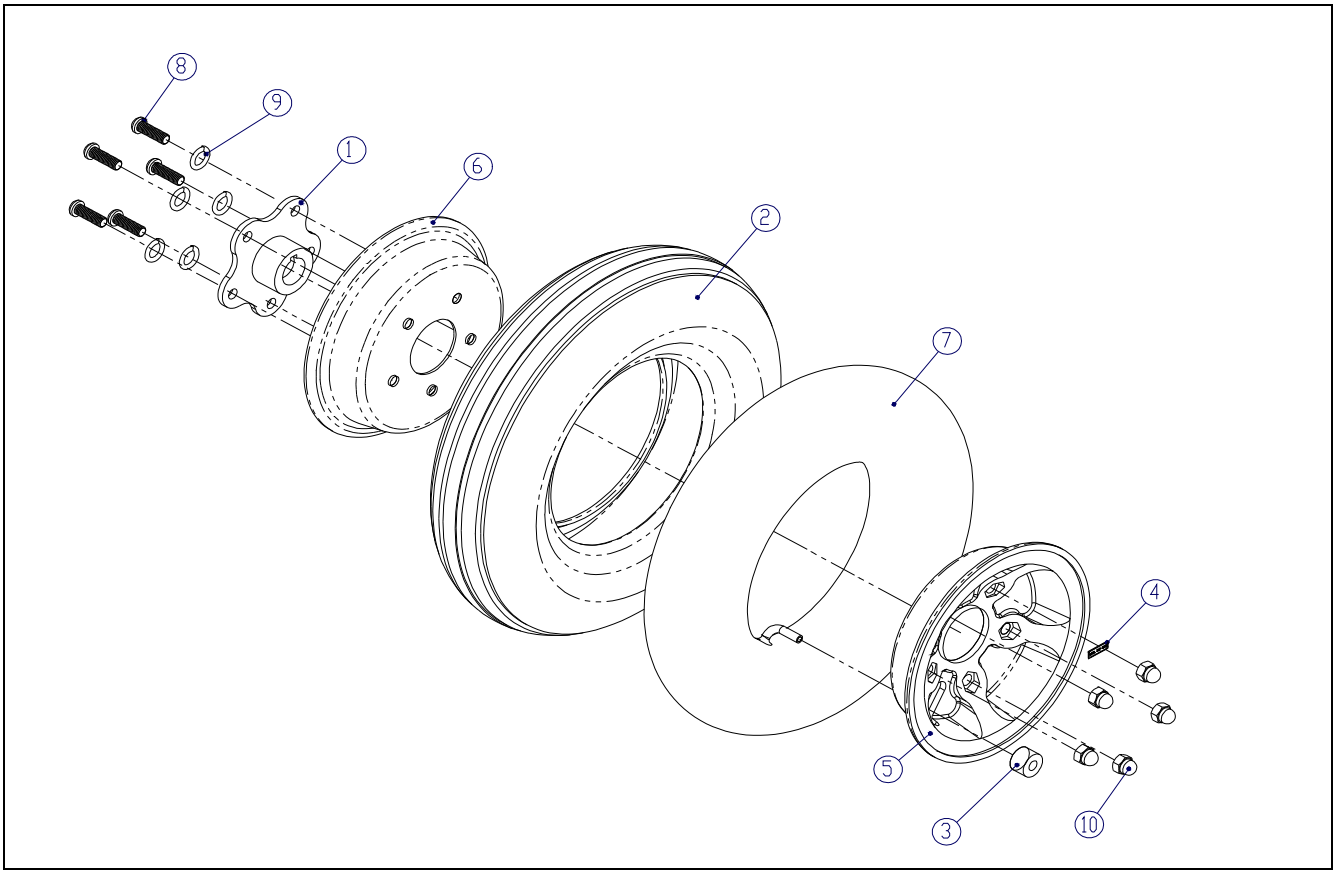
Pos	Article number	Units	Description	
1	No spare part	1	Front frame assy 4w	
2	No spare part	1	Rear frame assy (modified)	
3	00000.4105	2	Bolt M8xP1.25*40mm	
4	00000.1502	2	Nut M8*P1.25	
5	See 028 and 029	1	Transaxle assy	
6	1001266	6	Screw M10xP1.5x90L (for Schmid transaxle)	
	1012699	4	Screw M10xP1.5x100L (for CT transaxle)	
7	00000.2004	8	Washer M10*P1.5*90mm	
8	00000.1703	8	Nut M10*P1.5	
9	013.00000.022	2	Shock absorber 10*27*1.8t	
10	00000.2104	12	Washer M10	
11	00000.4110	2	Bolt M10*P1.5*50mm	
12	1001268	4	Velcro hooks strip	
13	1001269	5	Velcro hooks strip	
14	00000.2003	4	Washer M8	
15	9000689	2	Rubber transaxle strip	
16	1004606	2	Bush 20*8mm	

025: REAR FRAME ASSY



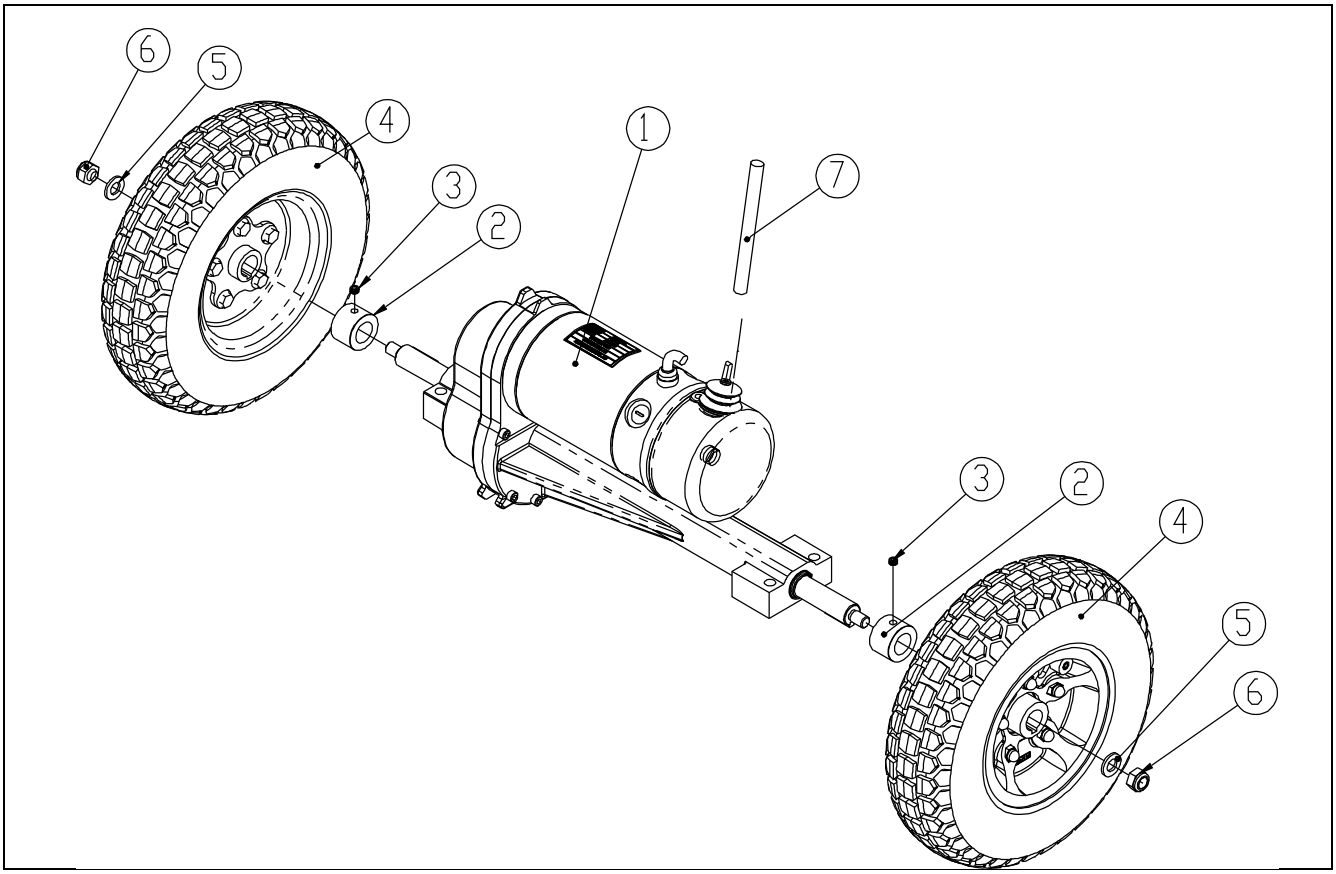
Pos	Article number	Units	Description	
1	110.00082.000	1	Rear Suspension Bridge	
2	No spare part	1	Label "serial number"	
3	00001.1110	2	Rivet pop	
4	1010353	4	Plastic wheel	
5	00000.2003	8	Flat washer M8 black	
6	00000.1702	2	Lock nut M8xP1.25 black	
7	1001232	2	Screw M8xP1.25x75L black	
8	126.00021.000	1	Rear bumper	
9	00000.2004	2	Flat washer M10	
10	00000.1703	2	Lock nut M10xP1.5	
11	1001233	4	Bushing	
-	1001230	1	Rear frame assy	

026: REAR TIRE ASSY



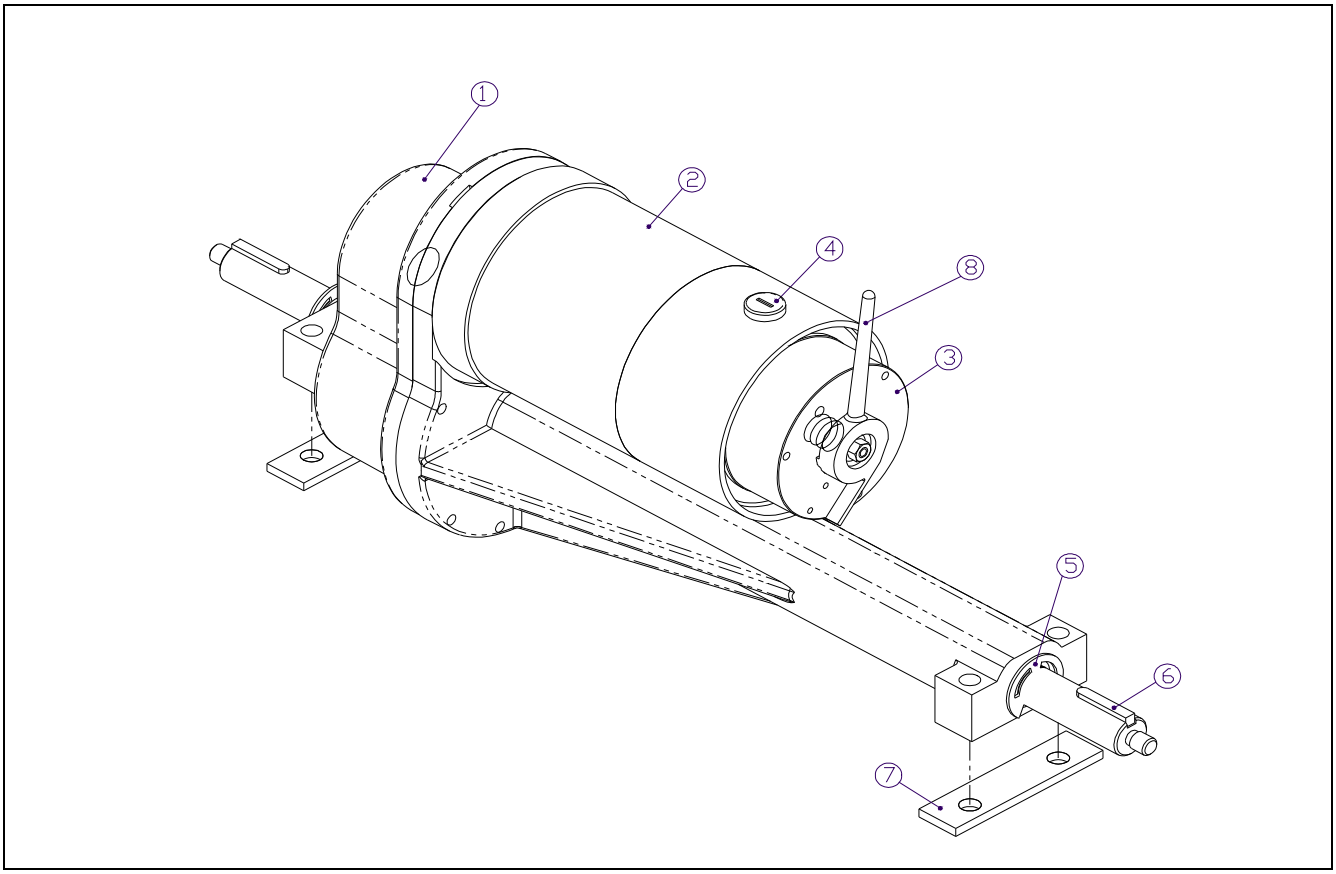
Pos	Article number	Units	Description	
1	176.00202.000	1	Hub	
2	172.00051.000	1	Outer tire 4.10x3.50x6"	
3	176.00191.000	1	Spacer Bush	
4	00001.1462	1	Label max 2.7 bar	
5	173.00052.000	1	Outer Rim 6"	
6	173.00042.000	1	Inner Rim 6"	
7	171.00021.000	1	Tube Inner with Cap	
8	00000.4135	5	Screw M8xP1.25x25L	
9	00000.2203	5	Spring washer SW8	
10	00000.1802	5	Nut M8xP1.25	
-	170.00352.000	2	Rear tire assy	

027: TRANSAXLE ASSY



Pos	Article number	Units	Description	
1	See 028 and 029	1	Transaxle	
2	1001246	2	Collar	
3	1001247	2	Set Screw M8xP1.25x5L	
4	170.00352.000	2	Rear tire Assy	
5	1001387	2	Flat washer 12x24x2.5	
6	00000.1703	2	Lock nut M12xP1.75	
7	1001242	1	Freewheel lever for Schmid transaxle	
	1011586	1	Freewheel lever for CT transaxle	

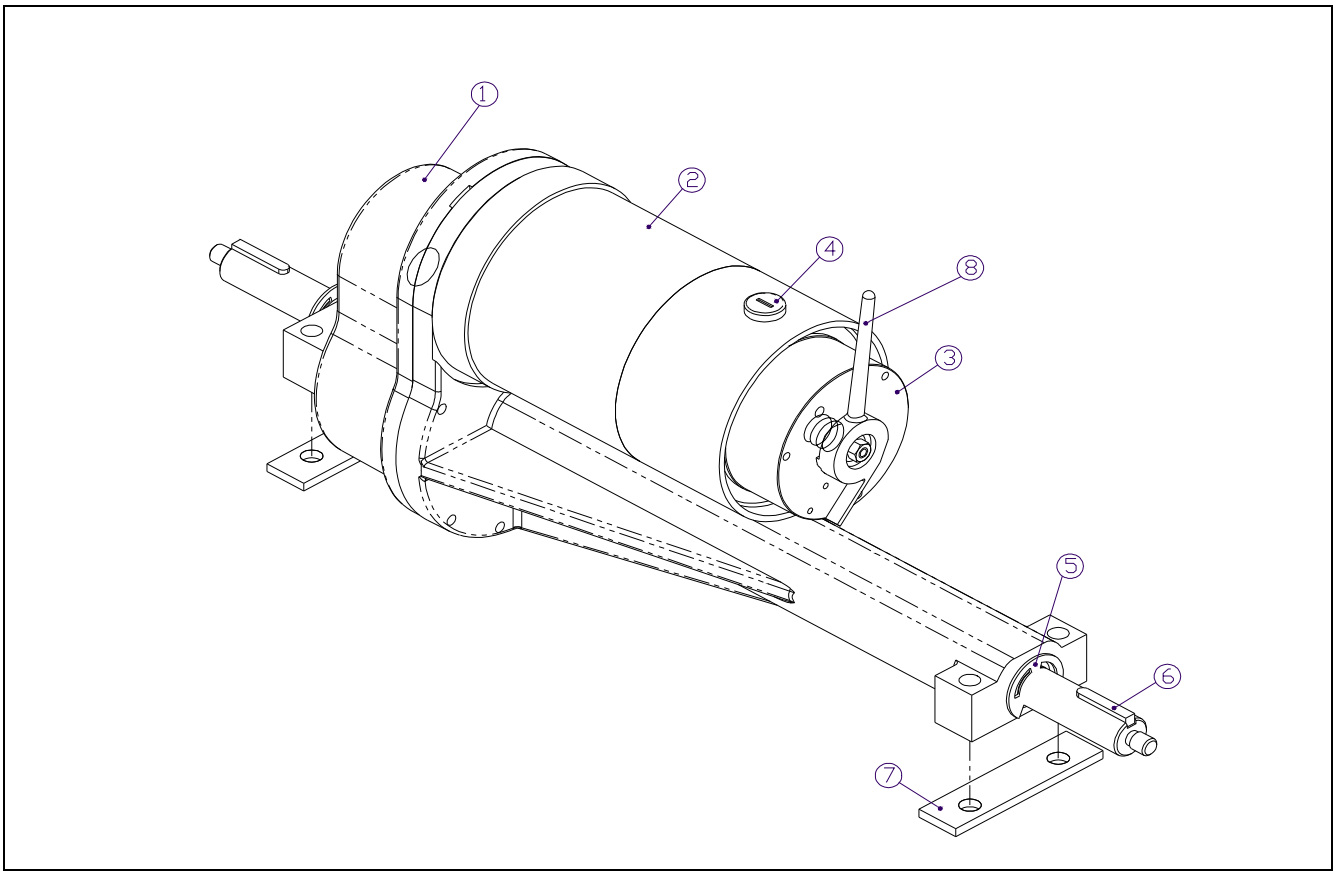
028: TRANSAXLE STANDARD



Pos	Article number	Units	Description	
1	1002356	1	Transaxle Schmid (Solo)	
	1009685	1	Transaxle Schmid (S-Drive)	
	1012904	1	Transaxle CT (S-Drive)	
2	No spare part	1	Motor 15 kmph	
3	1003267	1	Brake Assy Schmid	
	9003297	1	Brake Assy Schmid from 09-2008 + S-Drive	
	1011584	1	Brake Assy CT	
4	1002646	2	Motor brush till 08-2008	
	103.00031.000	2	Motor brush from 09-2008	
	1011585	1	Motor brush set CT	
5	1001239	2	Clip E19	
6	103.00091.000	2	Wedge for Schmid transaxle	
	1012123	2	Wedge for CT transaxle	
7	9000689	2	Transaxle mat	
8	No spare part	-	-	

-	1003209	1	Friction plate for Schmid transaxle	

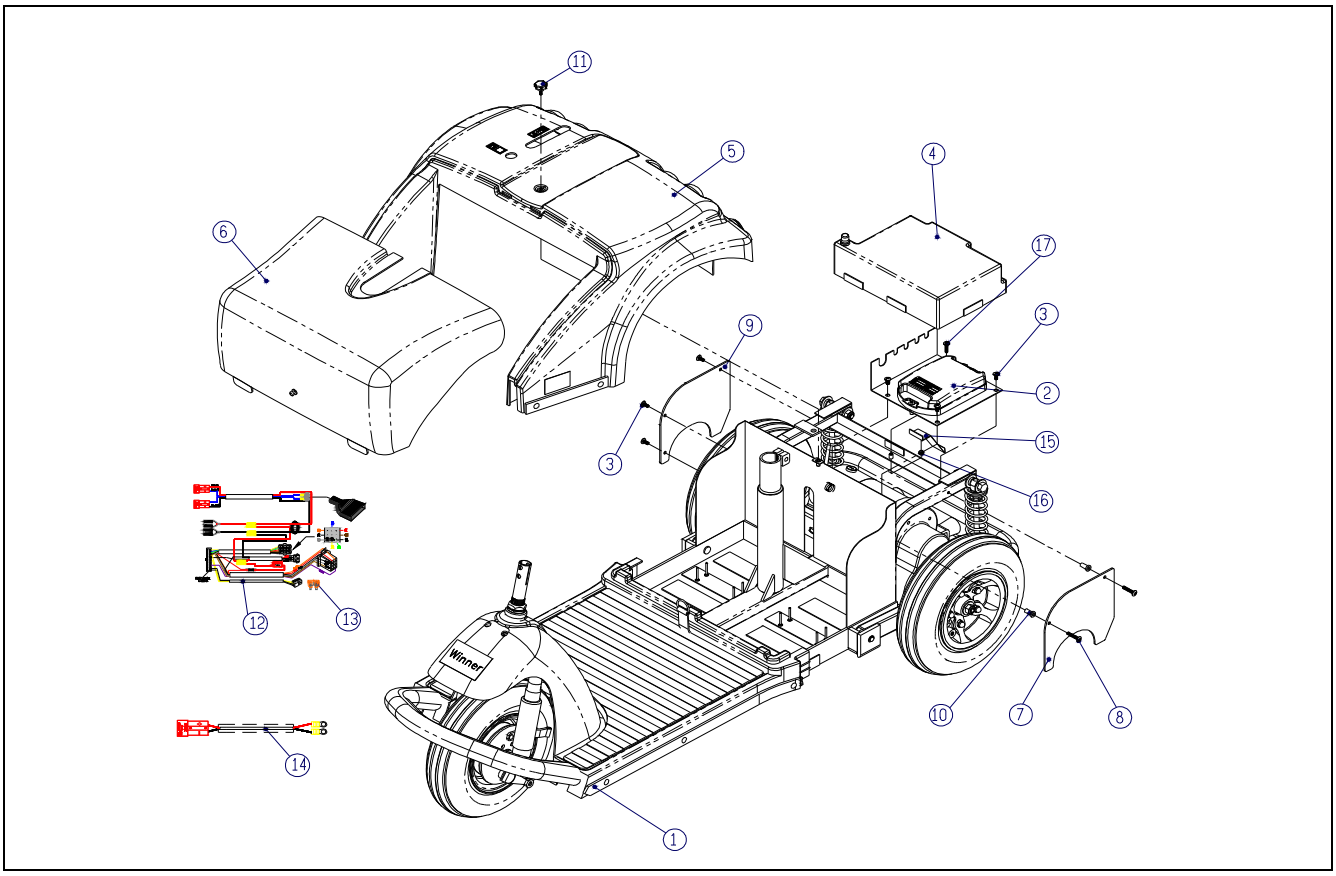
029: TRANSAXLE ALPINE



Pos	Article number	Units	Description	
1	9003239	1	Transaxle Alpine, Solo (max. 9 km/h)	
	1009686	1	Transaxle Alpine, S-Drive (max. 9 km/h)	
2	No spare part	1	Motor 15 kmph	
3	1003267	1	Brake Assy	
	9003297	1	Brake Assy Schmid from 09-2008 + S-Drive	
4	1002646	2	Motor brush till 08-2008	
	103.00031.000	2	Motor brush from 09-2008	
5	1001239	2	Clip E19	
6	103.00091.000	2	Wedge	
7	9000689	2	Transaxle mat	
8	No spare part	-	-	

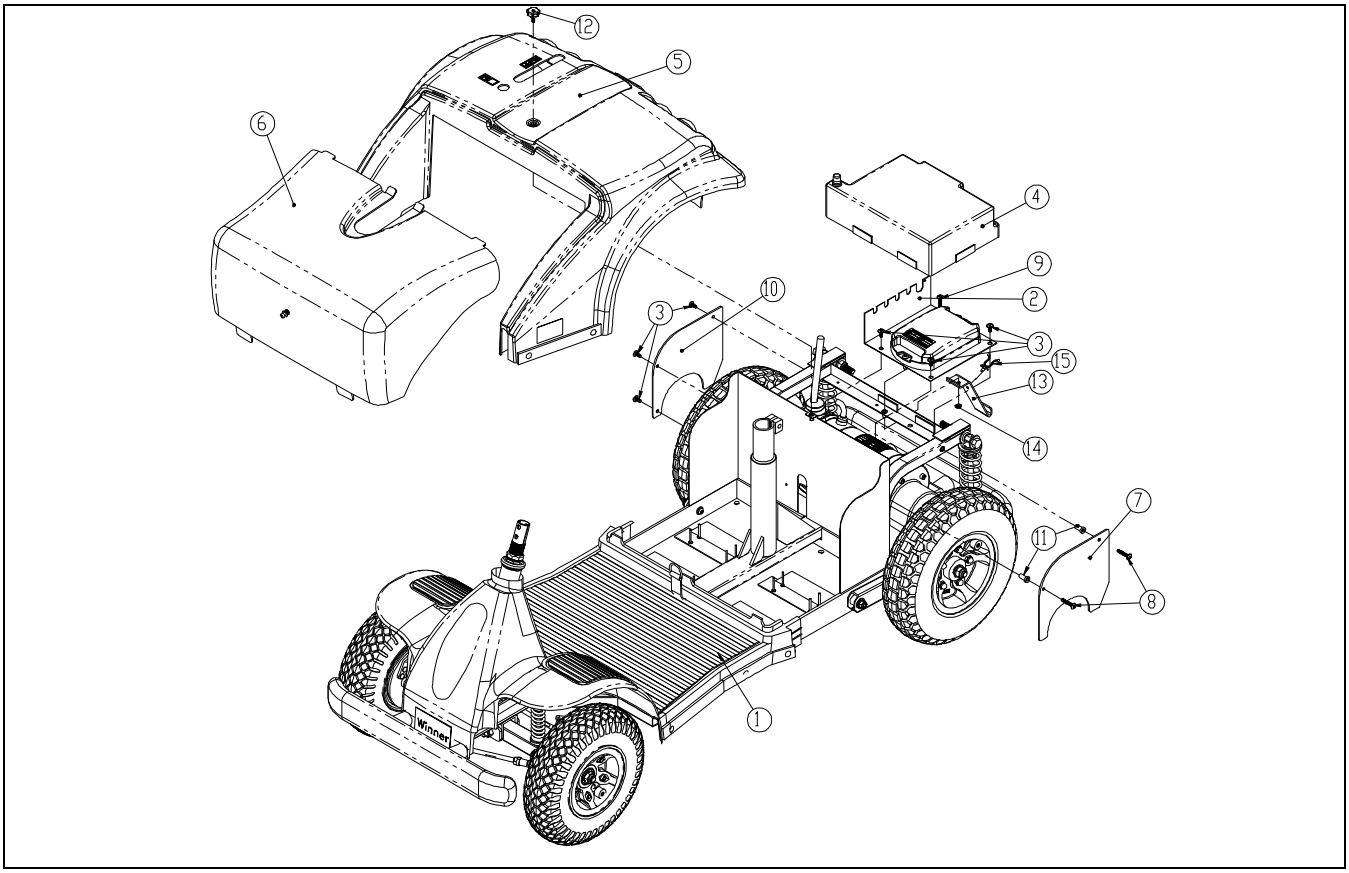
-	1003209	1	Friction plate	

030: SCOOTER ASSY (3W)



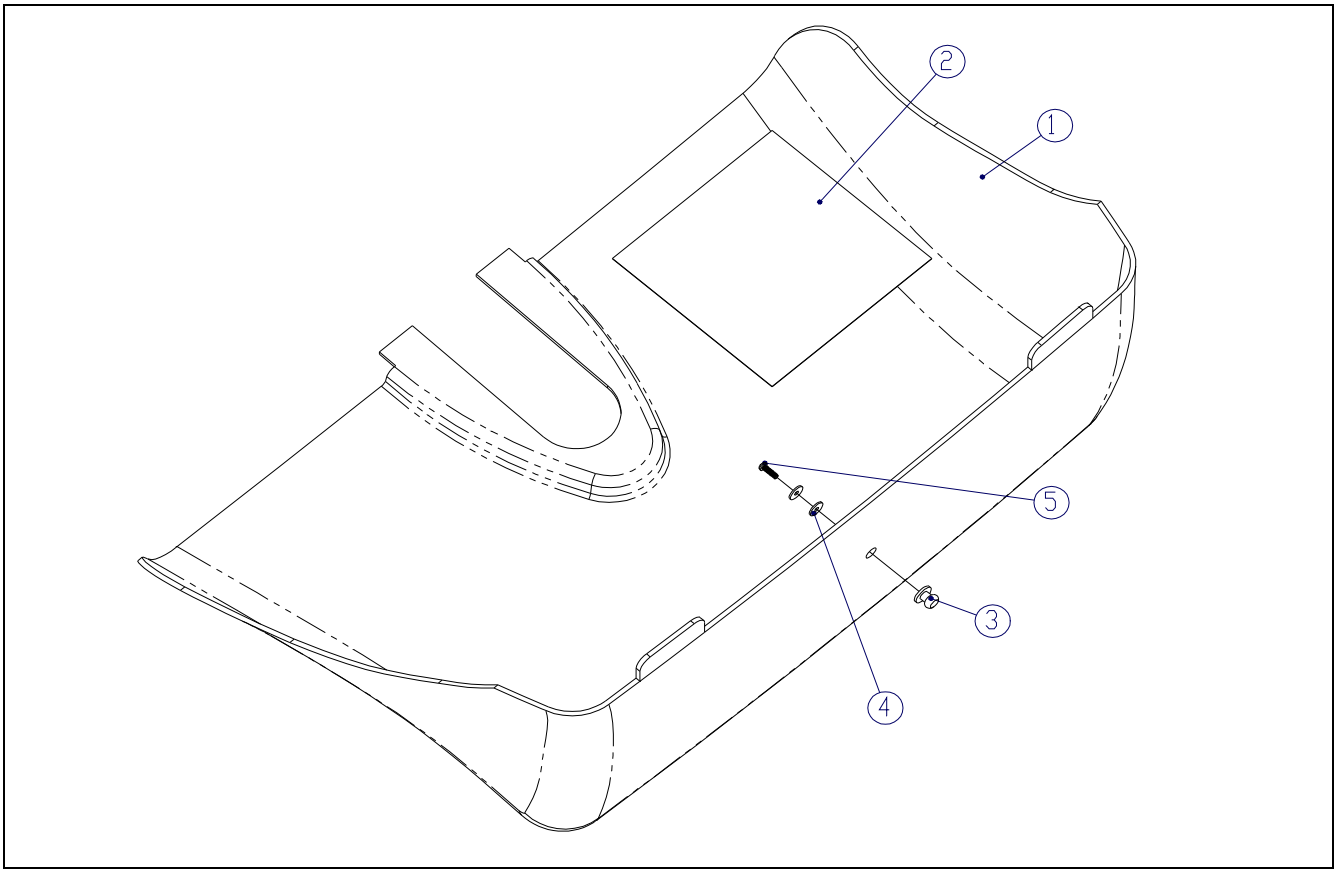
Pos	Article number	Units	Description	
1	No spare part	1	3W scooter assy	
2	No spare part	1	Controller assy	
3	00000.3200	6	Screw M5xP0.8x12L	
4	No spare part	1	Controller cover assy	
5	052.00312.000	1	Rear motor cover assy	
6	052.00452.000	1	Battery cover assy	
7	1001302	1	Transaxle plate (LH)	
8	1001303	2	Screw M5xP0.8x30L	
9	1001304	1	Transaxle plate (RH)	
10	1001305	2	Bush	
11	1001306	1	Star knob	
12	055.00421.000	1	Controller wire assy (Solo)	
	9003109	1	Power harness (S-Drive)	
13	005.01180.000	1	Fuse 5A (Solo)	
	9003553	1	Fuse 5A (S-Drive)	
14	055.00431.000	2	Battery power wire (Solo)	
	9003108	2	Battery power wire (S-Drive)	
-	9002752	2	Set battery connection covers	
-	99117	2	Fuse 100A (S-Drive)	
15	1001307	1	Fix bracket rear shroud	
16	00000.1700	1	Lock nut M5xP0.8	
17	00000.3204	1	Screw M5xP0.8x25L	

031: SCOOTER ASSY (4W)



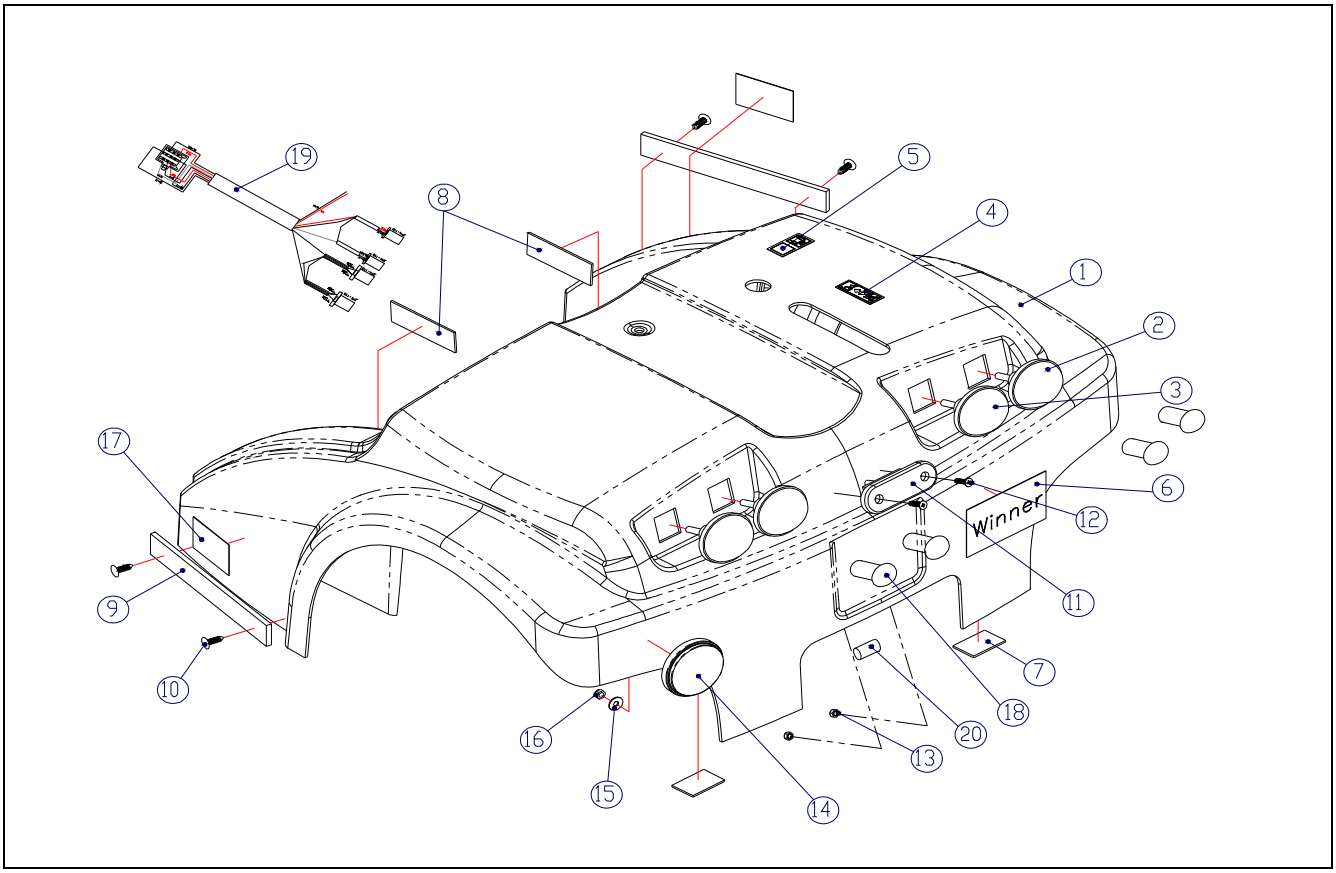
Pos	Article number	Units	Description	
1	No spare part	1	4w scooter por assy	
2	No spare part	1	Controller assy	
3	00000.3200	6	Bolt M5*P0.8*12mm	
4	1001288	1	Controller cover	
5	052.00312.000	1	Rear cover assy	
6	052.00452.000	1	Battery cover assy	
7	1001302	1	Mud guard 1.2t*168*187 LH	
8	1001303	2	Bolt M5*P0.8*30mm	
9	00000.3204	1	Bolt M5*P0.8*25mm	
10	1001304	1	Mud guard 1.2t*168*187 RH	
11	1001305	2	Bush 12*23mm	
12	1001306	1	Knob	
13	1001307	1	Bracket for rear cover	
14	00000.1700	1	Lock nut M5*P0.8	
15	No spare part	1	Twist cable clip	

032: BATTERY COVER ASSY



Pos	Article number	Units	Description	
1	No spare part	1	Battery cover	
2	008.00000.591	1	Label circuit diagram	
3	1001284	1	Window post	
4	00000.2009	2	Flat washer M3	
5	1001286	1	Screw M3xP0.5x10L	
-	052.00452.000	1	Battery cover assy	

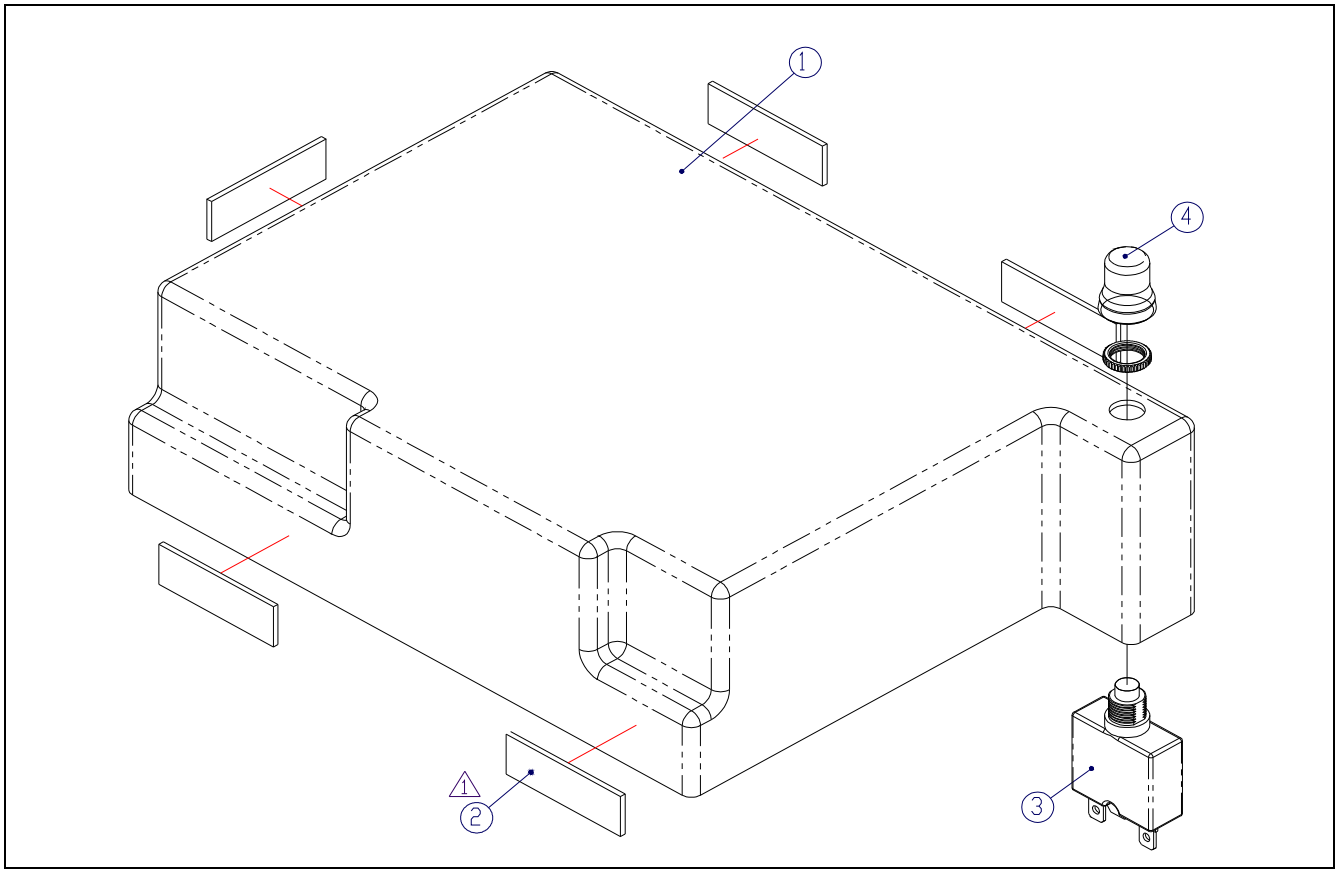
033: REAR MOTOR COVER ASSY



Pos	Article number	Units	Description	
1	052.00392.000	1	Rear motor cover	
2	264.00101.000	1	Rear indicator assy (orange)	
3	1014195	1	Rear light assy (red)	
4	008.00000.411	1	Label engage/release	
5	008.00000.421	1	Label circuit breaker	
6	008.00000.401	1	Label "Winner"	
7	1001268	2	Velcro-loops	
8	1001269	2	Velcro-loops	
9	126.00052.000	2	Bumper trim	
10	001.15010.002	4	Snap button	
11	1001280	1	Break light assy	
12	00000.3600	2	Screw M4xP0.7x16L	
13	00000.1705	2	Lock nut M4xP0.7	
14	051.00021.000	1	Reflector (red)	
15	00000.2001	1	Flat washer M5	
16	00000.1700	1	Lock nut M5xP0.8	
17	008.00000.291	2	Label movingpeople.net	
18	1001281	4	Bulb DC24V 5W T9.5	
19	055.00411.000	1	Rear light cable assy	
-	052.00312.000	1	Rear motor cover assy	

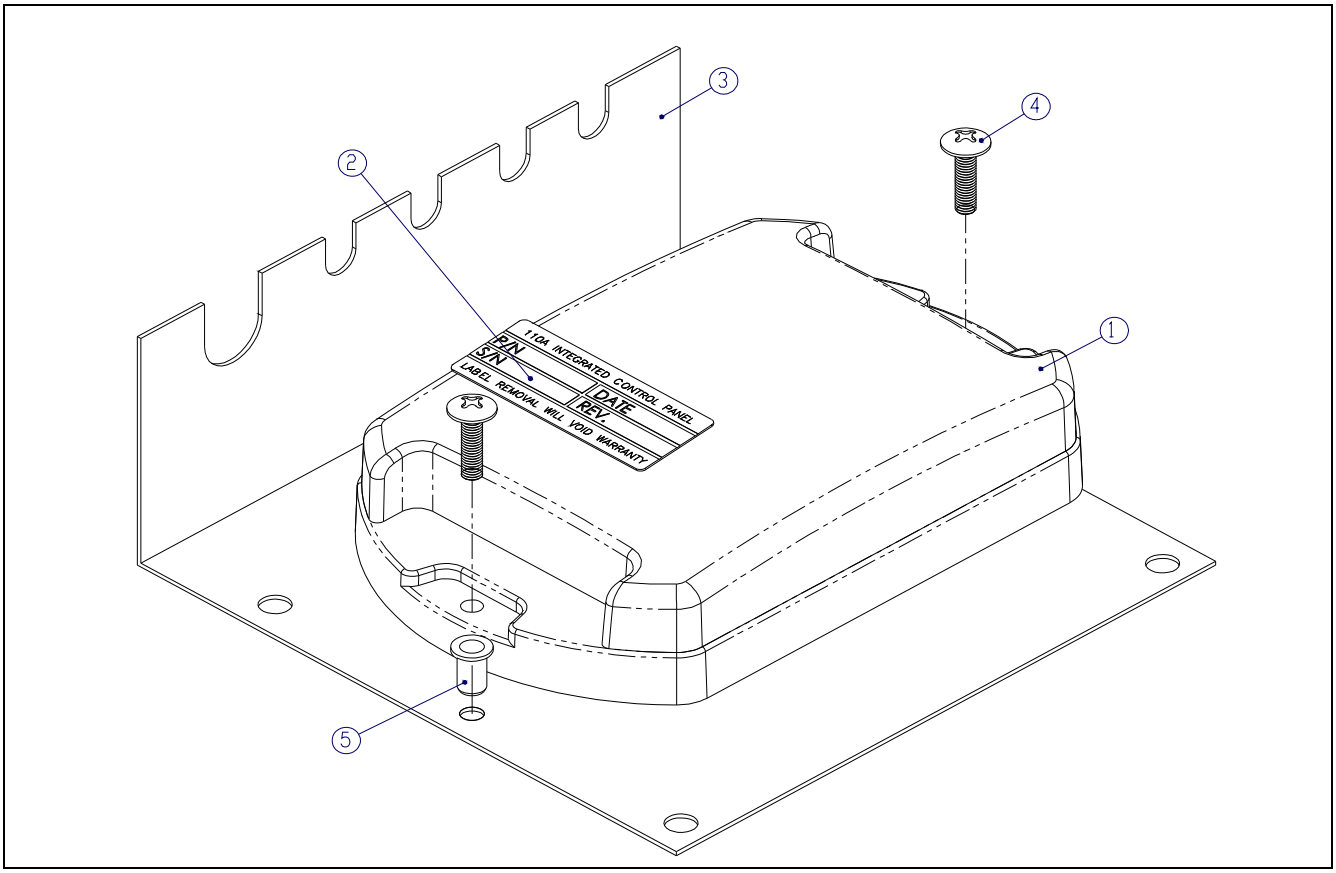
Winner 2004

034: CONTROLLER COVER ASSY



Pos	Article number	Units	Description	
1	1001288	1	Cover of controller	
2	1001268	5	Velcro-loops	
3	1001290	1	Circuit breaker 60A (Solo)	
4	1001291	1	Cap of circuit breaker 60A (Solo)	

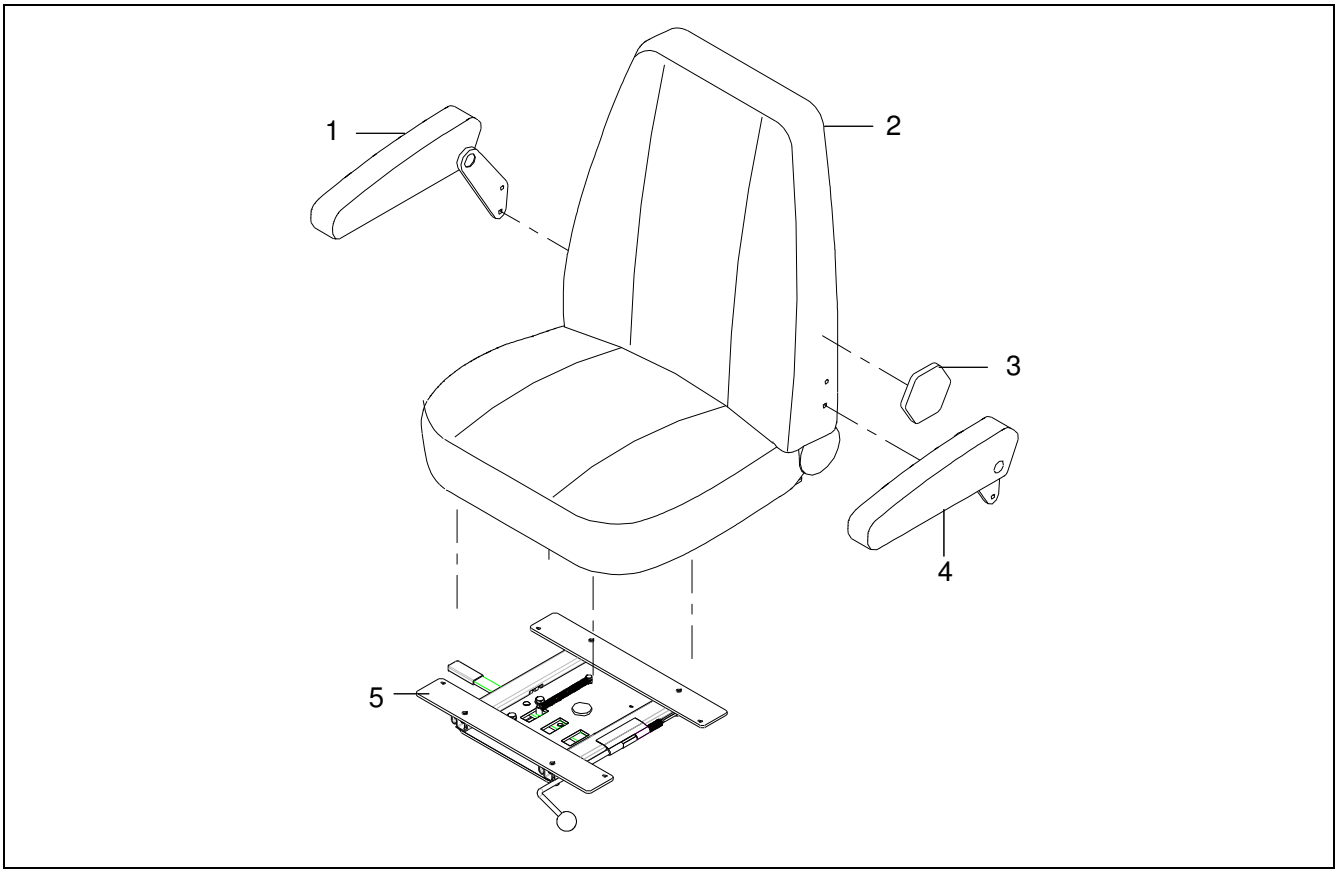
035: CONTROLLER ASSY



Pos	Article number	Units	Description	
1	162.00031.000	1	Controller 110A (not programmed)	
	9003481	1	S-Drive controller 120A	
	9003788	1	S-Drive controller 140A	
2	No spare part	1	Label control panel s/n	
3	1001295	1	Controller bracket (Solo)	
	9003089	1	Controller bracket (S-Drive)	
4	No spare part	2	Screw M5xP0.8x20L	
5	No spare part	2	Nut-inserts	

Winner

036: SEAT & SEAT FRAME



Pos	Article number	Units	Description	
1	118.00221.000	1	Armrest, right	
2	1002861	1	Master seat with armrests	
3	1003383	1	Lumbar knob	
4	118.00231.000	1	Armrest, left	
5	9000034	1	Seat frame with slider (right-side operation)	
-	9000042	1	Seat fixation strip	
-	1366	1	Plastic cover for seat fixation strip	
-	9000932	1	Seat post	
-	9003907	1	Nylon bearing seat post	

01-01-2012:
Version 2012v1

Page	Drawing	Position	Changes
15-19	-	-	Changed the driving programs

14-03-2012:
Version 2012v2

Page	Drawing	Position	Changes
54	28	1	Changed drawing description and description article numbers 1002356, 1009685 and 1012904
55	29	1	Changed drawing description and description article numbers 9003239 and 1009686

01-01-2013:
Version 2013.v1

Page	Drawing	Position	Changes
56	30	-	Added article number 9002752
62	36	-	Changed article number 9000933 into 9003907